

Memorandum

Date: January 26, 2017
To: William Lee
CC:
From: Tim Rooper
Subject: Chemsol OU-3 Off-Site Remedial Investigation
November 2017 OSW Sampling Event
Project No.: 160688

This Technical Memorandum presents results from a third sampling event at Chemsol off-site well locations collected in November 2017. As explained herein, the results of this sampling event confirm that sufficient data has now been obtained for delineation of the off-site contaminant plume and we recommend proceeding with a comprehensive groundwater sampling event contemplated in the RI/FS Work Plan (approved by USEPA by letter dated September 2, 2010), to obtain data required to complete the human health risk assessment and OU-3 Feasibility Study.

Description of Sampling Events

The sampling event conducted in November 2017 was the third sampling event at off-site well locations OSW-7 and OSW-8 (See Figure 1). The first two sampling events were collected in May 2017 and August 2017, with results reported in Technical Memoranda dated June 14, 2017 and September 21, 2017, respectively. Pursuant to EPA's April 3, 2017 approval of the proposed sampling approach, this sampling event also included the collection of groundwater samples from off-site well locations OSW-1, OSW-2, OSW-3, OSW-5, and OSW-6. This is the first time since October 2014 that OSW-2, OSW-3, OSW-5 and OSW-6 have been tested. OSW-1, which was intended to be sampled in November 2017 was missed during this sampling event and subsequently sampled on December 11, 2017 and was also the first time since September 2013 that samples were collected from this location. Pursuant to EPA's earlier approval, OSW-4 was not sampled in 2017 as this



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location represents the eastern fringe of the plume, is cross gradient from the on Site groundwater extraction wells such that their operation would have had little effect on groundwater quality, and sufficient interim water quality data for this location has already been collected.

Samples were collected consistent with approved protocols which include purging each sampling port two times, followed by collection of the sample directly from the sample port tubing into laboratory provided glassware. The collected samples were then stored on ice and transported under chain of custody to Test America laboratory for analysis of Target Compound List (TCL) volatile organic compounds (VOCs).

Field parameters recorded at the time of sampling are shown in attached Table 1, a comparison of historical field parameters are shown in Table 2, and the current and historical analytical results are summarized in Table 3.

By way of background, the sampling locations, sampling port depths and water bearing units monitored and discussed in more detail below consist of the following:

| Location and Sampling Port (P) | Water bearing zone and depth below ground surface. | Location and Sampling Port (P) | Water bearing zone and depth below ground surface. |
|---|--|---|---|
| OSW-1 P1 | Upper Permeable 233 - 243 | OSW-5 P1 | Upper Permeable 90 - 100 |
| OSW-1 P2 | Principal 290 - 300 | OSW-5 P2 | Upper Permeable 258 - 268 |
| OSW-1 P3 | Principal 350 - 360 | OSW-5 P3 | Principle 314 - 324 |
| OSW-1 P4 | Principal 400 - 410 | OSW-5 P4 | Principle 360 - 370 |
| OSW-1 P5 | Lower Bedrock 520 - 530 | OSW-5 P5 | Principal 434 - 444 |
| | | OSW-5 P6 | Lower Bedrock 529 - 539 |
| OSW-2 P1 | Upper Permeable 70 - 80 | OSW-6 P1 | Upper Permeable 205 - 215 |
| OSW-2 P2 | Upper Permeable 190 - 200 | OSW-6 P2 | Principal 264 - 274 |
| OSW-2 P3 | Principal 250 - 260 | OSW-6 P3 | Principal 342 - 352 |
| OSW-2 P4 | Principal 315 - 325 | OSW-6 P4 | Principal 415- 425 |
| OSW-2 P5 | Principal 380 - 390 | OSW-6 P5 | Lower Bedrock 458- 468 |
| OSW-2 P6 | Lower Bedrock 468 - 478 | | |
| OSW-3 P1 | Upper Permeable 70 - 80 | OSW-7 P1 | Upper Permeable 50 - 60 |
| OSW-3 P2 | Upper Permeable 130 - 140 | OSW-7 P2 | Upper Permeable 185 - 195 |
| OSW-3 P3 | Principal 200 - 210 | OSW-7 P3 | Principal 290 - 300 |

| | | | | | |
|----------|---------------|-----------|----------|---------------|-----------|
| OSW-3 P4 | Principal | 264 - 274 | OSW-7 P4 | Principal | 430 - 440 |
| OSW-3 P5 | Principal | 350 - 360 | OSW-7 P5 | Lower Bedrock | 460 - 470 |
| OSW-3 P6 | Lower Bedrock | 410 - 420 | OSW-7 P6 | Lower Bedrock | 510 - 520 |

| | | |
|----------|---------------|-----------|
| OSW-7 P7 | Lower Bedrock | 530 - 540 |
|----------|---------------|-----------|

| | | |
|----------|-----------------|-----------|
| OSW-8 P1 | Upper Permeable | 65 - 75 |
| OSW-8 P2 | Upper Permeable | 160 - 170 |
| OSW-8 P3 | Principal | 255 - 265 |
| OSW-8 P4 | Principal | 350 - 360 |
| OSW-8 P5 | Principal | 445 - 455 |
| OSW-8 P6 | Lower Bedrock | 470 - 485 |
| OSW-8 P7 | Lower Bedrock | 528 - 543 |

Sampling Results

The results of the recent sampling event, and comparison to prior sampling results are discussed below for the Phase I (OSW-1, OSW-2 and OSW-3) and Phase II (OSW-5 and OSW-6) locations, followed by the Phase III (OSW-7 and OSW-8) locations. In conformance with the EPA-approved sampling approach, this Technical Memorandum also provides recommendations for the next steps towards completion of the RI/FS.

OSW-1, OSW-2, OSW-3, OSW-5, and OSW-6

Cornerstone Representatives collected groundwater samples from OSW-2, OSW-3, OSW-5, and OSW-6 on November 16-17, 2017 and OSW-1 on December 11, 2017. The objective of the testing at these locations was to collect additional water quality data for comparison to data collected since the last sampling events completed in 2013 and 2014, and to evaluate potential changes in water quality associated with operation of the on-site groundwater extraction system¹.

With respect to field parameters, most of the ports at OSW-2 indicate lower dissolved oxygen (DO) and Redox Potential (Redox) when compared to the October 2014 event. The ports in OSW-3, OSW-5, and OSW-6 indicate more mixed results with DO and Redox in some ports increasing and some ports decreasing. Field parameters at OSW-1 were not collected due to a field error and are therefore not discussed. Overall, the results generally

¹EPA's selected remedy for on-site groundwater is on-site containment with mass removal to the extent practicable which became fully operational in January 2011. Contaminant concentration in the downgradient off-site wells is expected to be affected by this multi-year pumping operation.

indicate mild reducing to sometimes mild oxidizing conditions that are not particularly conducive to degradation of VOCs (i.e., the preferred pathway of reductive dechlorination). The pH, turbidity, and specific conductivity results are generally consistent with historical data with pH generally neutral, low specific conductivity, and generally low turbidity.

Comparison of the recent analytical results to historical data (Table 3) indicates generally lower concentrations of VOCs at all of the ports at OSW-1, OSW-2 and OSW-3, and at ports P2, P4, and P5 at OSW-5; (note that given laboratory analytical precision and typical temporal variability, these lower concentrations on a compound specific basis are not likely statistically significant at this time). At OSW-5, port P1 has historically had minimal detectable VOCs and remains generally consistent with historical results; port P6 indicates an increase in comparison to the October 2014 results but is generally stable in comparison to the data from the prior two sampling events in April and July of 2017, and; , port P3 indicates an overall increase in concentrations as compared to the historical data, but again not necessarily statistically significant. The results from OSW-6 are consistent with the prior four sampling events with all constituent concentrations below applicable New Jersey Groundwater Quality Standards (NJGWQS), with the exception of 1,4-dioxane. The concentrations noted above are most likely attributable to the effects of the upgradient groundwater extraction wells located along the northern Chemsol property boundary, particularly with respect to OSW-1, OSW-2 and OSW-3, which are closest to the Site's groundwater extraction wells. OSW-5 is located further downgradient, such that the effects of the groundwater extraction system would be anticipated to become more evident in the future. However, the effect of matrix diffusion on the groundwater concentrations is also evident in the overall consistency of the data and persistence of individual compounds above the NJGWQS.

As noted in the previous Technical Memorandum, 1,4-dioxane is analyzed and reported as a VOC and historical concentrations have shown significant variability over time. Although the reported 1,4-dioxane concentrations do not show as much variability during the most recent sampling event, the observed variability may in part be associated with the analytical method. While analysis for 1,4-dioxane via Method 8260 (i.e. as a VOC) is an approved method, recent advances in analytical methodology indicate that analysis using Method 8270 (i.e., as an SVOC) with isotope dilution provides more consistent and repeatable results. As other Site COCs (e.g. carbon tetrachloride, trichloroethene, and chloroform) can be used to identify the plume, and to be consistent with historical data, the interim sampling events have analyzed 1,4-dioxane using Method 8260. However, for the

upcoming comprehensive sampling event called for in the RI/FS work plan, 1,4-dioxane will be analyzed using Method 8270 with isotope dilution.

Acetone is also reported sporadically and is typically found associated with a given sampling event and absent from others, suggesting the possibility that the concentrations are lab related. Of note is that the variability of these two constituents, 1,4-dioxane and acetone, skews the TVO calculations such that use of the TVO results for general comparison of the results from sampling event to sampling event is difficult. Accordingly, Table 3 provides a second calculation for TVO which excludes both the 1,4-dioxane and acetone concentrations. Removing these two compounds provides a better general understanding of the concentration changes with time and further supports the statements above.

OSW-7 and OSW-8

The third round of groundwater samples were collected from locations OSW-7 and OSW-8 on November 17, 2017. The objective of this third round of sampling was to continue to assess groundwater quality at OSW-7 and OSW-8 as conditions equilibrate following disruption of the aquifer during drilling and well installation activities.

The field parameters at OSW-7 and OSW-8 indicate notably lower (negative) redox values in ports P3 through P7 at OSW-7 and ports P4 through P7 in OSW-8, but still mildly reducing, while the shallower ports at each location indicate more stable redox values, and sometime mildly oxidizing. The DO results are more variable, but in conjunction with the redox values are indicative of more oxygenated water within the shallower ports, while the deeper sampling ports represent groundwater associated with a slightly more reducing geochemistry that would be anticipated at depth.

The VOC results summarized in Table 3 are generally consistent with both the screening samples collected during the well drilling activities and with the first and second round of sampling in May and August 2017. Specifically, trichloroethene was detected above its groundwater quality standard of 1 ug/l at OSW-8 Ports P3, P4, and P5 at a maximum concentration of 12 ug/l, while carbon tetrachloride was detected above its groundwater quality standard of 1 ug/l at OSW-8 Ports P3 and P4 at a maximum concentration of 6.5 ug/l. These constituents were not detected (ND) in any of the sampling ports at OSW-7. Concentrations of these Site COCs (i.e., trichloroethene and carbon tetrachloride) measured

at the Chemsol northern property boundary at well cluster MW-203 during the most recent semi-annual sampling event (July 2017) and at off-site wells OSW-2, OSW-5 and OSW-8 in November 2017, are illustrated in Figures 2 and 3. This cross section represents a downgradient flow path within the center of the plume and illustrates that concentrations decline sharply downgradient of OSW-5. Additionally, and as discussed further below, the zone of capture developed by the Chemsol groundwater extraction system extends north of OSW-5 within both the Principal and Lower Bedrock aquifers.

Also consistent with the May and August 2017 sampling results, the compound 1,4-dioxane (analyzed via method 8260 SIM) exceeds the Groundwater Quality Standard (GWQS) of 0.4 ug/L in all of the collected samples at locations OSW-7 and OSW-8. Concentrations of 1,4-dioxane along the same flow path discussed above are illustrated in Figure 4. Concentrations at OSW-7, which is not within the cross section presented on Figure 4 are presented in Table 3. As shown on Table 3, 1,4-dioxane is the only constituent above groundwater quality standards at OSW-7, the concentrations are typically higher and at shallower depth intervals at OSW-7 as compared to OSW-8, and the Site COCs carbon tetrachloride and trichloroethene are not detected at OSW-7.

Collectively, these data indicate that the 1,4-dioxane concentrations at OSW-7 are unrelated to the Chemsol plume. Specifically, Chemsol site-related COCs in OSW-8 are first observed at a depth of 255' below ground surface. This provides evidence that the Chemsol plume historically migrated vertically downward with distance from the Site. In the past, it has generally been assumed that the presence of 1,4-dioxane represented the leading edge of the plume because the chlorinated VOCS would be anticipated to degrade and attenuate more readily than 1,4-dioxane. However, recent research (SERPD Report 2307) indicates that this is not necessarily the case and that the chlorinated VOCs may represent the leading edge of the plume. Also, there is no basis to suspect that advective transport of these dissolved chlorinated VOC compounds would be any different from 1,4-dioxane. In other words, the absence of chlorinated VOCs may be explained by degradation and attenuation. However, the presence of site related chlorinated VOCs can only be explained by advective transport, which would be responsible for the migration of both chlorinated VOCs and 1,4-dioxane. Therefore, if the dissolved chlorinated VOCs associated with the Site are migrating vertically with distance from the site, 1,4-dioxane would do the same.

Given the above, if the 1,4-dioxane observed at OSW-7 was associated with the Chemsol Site, then the concentrations of 1,4-dioxane in the shallow ports at OSW-7 should be generally consistent with those observed at OSW-8 (i.e., single digit concentrations).

However, contrary to this, higher 1,4-dioxane concentrations are reported at shallower depths at OSW-7 (140 ug/l and 130 ug/l at ports 2 and 3 during the November 2017 sampling event). Additionally, the concentration at OSW-7 ports 5 and 6 are higher than any of the 1,4-dioxane concentrations observed at OSW-8. Collectively, these data are indicative of a more localized source of 1,4-dioxane, and do not indicate that the Chemsol Site is the source.

Additionally, OSW-8 is located south (upgradient) of Harris Industries, which historically used industrial groundwater supply wells that are no longer in operation. Historically, and while in operation, these wells would have represented the closest large scale (i.e. not accounting for typically low volume localized homeowner wells) groundwater withdrawal point downgradient of the Chemsol site. The reported Site COCs, this historical pumping, and the groundwater elevation data discussed below, indicate that OSW-8 likely represents a directional midpoint for the Chemsol plume width, while OSW-7 is located at the western fringe or beyond the lateral limits of the plume.

Finally, OSW-8 is the northern most off-site well that is closest to the regional groundwater discharge point represented by the large groundwater pumping centers to the north. Review of the groundwater elevation data collected from the off-site wells and summarized in Table 4, indicates upward gradients from the two deepest ports at OSW-8. Using data collected on December 11, 2017, Figure 5 presents groundwater equipotential contours in cross section originating at the Chemsol northern property boundary (MW-203 well cluster) through OSW-2, OSW-5 and OSW-8. This figure clearly illustrates the upward gradients and groundwater divide developed by the Chemsol groundwater extraction system and the large water supply wells to the north of OSW-8. Groundwater capture from the Chemsol extraction system extends off-site, north of OSW-5, in both the Principal Aquifer and the Lower Bedrock. Also illustrated is the greater vertical upward gradient observed at OSW-8 as compared to the other locations plotted on the cross section. This observation is consistent with the presence of large water supply wells that are typically, with a few exceptions, on the order of less than 400 feet deep. The upward gradients indicate that OSW-8 is within the area where pumping from the large groundwater pumping centers is having a direct influence on groundwater flow. Additionally, hydraulic heads measured at OSW-7, which is located just west of the cross section presented in Figure 5, are higher than the heads measured at OSW-5 and OSW-8. This indicates that OSW-7 is west of the flow path from the Chemsol site to the downgradient discharge point represented by the

municipal water supply wells and further supports the conclusion above that OSW-7 represents the western limit of the Chemsol plume.

Summary and Recommendations

The November 2017 sampling results from the Phase I (OSW-1, OSW-2, and OSW-3) and Phase II (OSW-5, OSW-6) wells provide a basis for comparison to data collected in 2012 – 2014. These findings indicate that the on-site groundwater extraction system is contributing to declining concentrations at these off site wells, although the effects of matrix diffusion on the overall consistency of the data are still evident. The forthcoming sampling event will provide a full suite of analyses at all of the OSW off-site locations and will facilitate further comparison as well as provide data for the human health risk assessment to be performed pursuant to the approved RI/FS Work Plan.

The data collected from the Phase III wells (OSW-7 and OSW-8), coupled with the known presence of historical industrial supply wells at Harris Industries indicates that OSW-8 likely represents the approximate midpoint and downgradient leading edge of the Chemsol plume, with Site COCs carbon tetrachloride and trichloroethene reported at low, typically single digit, concentrations. OSW-7 shows no evidence of the site COCs with the exception of 1,4-dioxane, which as described above is not related to the Chemsol Site, with all results below applicable groundwater quality standards.

In view of the known historical industrial well pumping at Harris Industries, which historically would have represented the closest downgradient discharge point, the low concentrations of Site COCs in OSW-8, the absence of site COCs in OSW-7, the hydraulic gradients as illustrated in Figure 5, and the likely co-mingling of plumes due to current and historical water supply pumping wells (as discussed in the OU-3 Work Plan and identified within the Record of Decision (ROD) for the CDE Superfund site located approximately 0.6 miles to the northeast of OSW-8), the Chemsol plume has been adequately delineated. Specifically, the installation of Phase III contingency wells, as contemplated in the approved OU-3 Work Plan to the west of OSW-7 and east of OSW-8, are not needed and will not provide additional data that is meaningful to completion of the RI/FS. Accordingly, on behalf of the Chemsol PRP Group, it is recommended to move forward with the aforementioned comprehensive groundwater sampling event, which will provide the data needed for completion of the RI Report, human health risk assessment, and Feasibility Study Report, all as required.

Table 1
Summary of Field Parameters
OSW-1, OSW-2, OSW-3, OSW-5, OSW-6, OSW-7 and OSW-8
November 16-17, 2017

| Sample Location | Sample Date | Dissolved Oxygen | pH | REDOX potential | Specific Conductivity | Temperature | Turbidity |
|-----------------|-------------|------------------|------|-----------------|-----------------------|-------------|-----------|
| OSW-1 P1 | 12/11/2017 | NR | NR | NR | NR | NR | NR |
| OSW-1 P2 | 12/11/2017 | NR | NR | NR | NR | NR | NR |
| OSW-1 P3 | 12/11/2017 | NR | NR | NR | NR | NR | NR |
| OSW-1 P4 | 12/11/2017 | NR | NR | NR | NR | NR | NR |
| OSW-1 P5 | 12/11/2017 | NR | NR | NR | NR | NR | NR |
| OSW-2 P1 | 11/16/2017 | 0 | 7.63 | -147 | 0.586 | 16.51 | 1.6 |
| OSW-2 P2 | 11/16/2017 | 0 | 7.72 | -178 | 0.398 | 16.24 | 0.7 |
| OSW-2 P3 | 11/16/2017 | 0 | 7.88 | -122 | 0.383 | 16.15 | 1.4 |
| OSW-2 P4 | 11/16/2017 | 0 | 7.85 | -108 | 0.284 | 15.88 | 2.1 |
| OSW-2 P5 | 11/16/2017 | 0 | N/A | -83 | 0.533 | 15.98 | 0.7 |
| OSW-2 P6 | 11/16/2017 | 0 | 7.73 | -53 | 0.485 | 16.07 | 0.1 |
| OSW-3 P1 | 11/16/2017 | 1.62 | 7.16 | 1 | 0.493 | 16.48 | 0 |
| OSW-3 P2 | 11/16/2017 | 3.62 | 7.63 | 112 | 0.3 | 16.23 | 0 |
| OSW-3 P3 | 11/16/2017 | 0 | 7.74 | 130 | 0.294 | 15.73 | 0 |
| OSW-3 P4 | 11/16/2017 | 0 | 7.8 | 140 | 0.281 | 15.52 | 0.2 |
| OSW-3 P5 | 11/16/2017 | 0 | 7.77 | -9 | 0.315 | 15.44 | 0.1 |
| OSW-3 P6 | 11/16/2017 | 0 | 7.83 | -95 | 0.337 | 15.28 | 0.5 |
| OSW-5 P1 | 11/17/2017 | 0 | 7.59 | -78 | 0.382 | 13.49 | 0 |
| OSW-5 P2 | 11/17/2017 | 0 | 7.55 | -24 | 0.499 | 14.1 | 0 |
| OSW-5 P3 | 11/17/2017 | 0 | 7.9 | -69 | 0.288 | 14.34 | 0 |
| OSW-5 P4 | 11/17/2017 | 0 | 7.85 | 23 | 0.282 | 14.63 | 0 |
| OSW-5 P5 | 11/17/2017 | 0 | 7.6 | -121 | 0.461 | 14.68 | 0 |
| OSW-5 P6 | 11/17/2017 | 0 | 7.6 | -73 | 0.634 | 14.64 | 0 |
| OSW-6 P1 | 11/16/2017 | 0 | 6.96 | 91 | 0.752 | 14.87 | 0 |
| OSW-6 P2 | 11/16/2017 | 0 | 7.66 | 9 | 0.312 | 15.08 | 4 |
| OSW-6 P3 | 11/16/2017 | 0 | 7.77 | 67 | 0.287 | 15.14 | 0 |
| OSW-6 P4 | 11/16/2017 | 0 | 7.74 | -67 | 0.391 | 15.05 | 0 |
| OSW-6 P5 | 11/16/2017 | 0 | 7.72 | -103 | 0.458 | 15.07 | 0 |
| OSW-7 P1 | 11/17/2017 | 2.13 | 7.81 | 92 | 0.363 | 14.88 | 0 |
| OSW-7 P2 | 11/17/2017 | 7.88 | 7.83 | -26 | 0.275 | 14.92 | 0 |
| OSW-7 P3 | 11/17/2017 | 0 | 7.91 | -115 | 0.271 | 15.02 | 0 |
| OSW-7 P4 | 11/17/2017 | 0 | 7.82 | -139 | 0.318 | 15.06 | 0 |
| OSW-7 P5 | 11/17/2017 | 0 | 7.72 | -153 | 0.417 | 15.04 | 0 |
| OSW-7 P6 | 11/17/2017 | 0 | 7.47 | -163 | 1.1 | 14.99 | 0 |
| OSW-7 P7 | 11/17/2017 | 0 | 7.34 | -175 | 2.06 | 14.95 | 0 |
| OSW-8 P1 | 11/17/2017 | 2.44 | 7.85 | 113 | 0.199 | 12.26 | 1.3 |
| OSW-8 P2 | 11/17/2017 | 7.27 | 7.87 | 72 | 0.262 | 12.24 | 0.7 |
| OSW-8 P3 | 11/17/2017 | 0 | 7.95 | 56 | 0.272 | 12.18 | 1.1 |
| OSW-8 P4 | 11/17/2017 | 6.42 | 7.99 | -129 | 0.244 | 12.12 | 0.9 |
| OSW-8 P5 | 11/17/2017 | 0 | 7.41 | -89 | 0.448 | 12.19 | 0 |
| OSW-8 P6 | 11/17/2017 | 6 | 7.92 | -127 | 0.284 | 12.21 | 0 |
| OSW-8 P7 | 11/17/2017 | 0 | 7.93 | -107 | 0.33 | 11.94 | 1.2 |

NR - parameter not recorded

TABLE 2
FIELD PARAMETER DATA
OSW SERIES MONITORING WELLS

| Sample Location | Sample Date | Dissolved Oxygen | pH | REDOX potential | Specific Conductivity | Temperature | Turbidity |
|-----------------|-------------|------------------|------|-----------------|-----------------------|-------------|-----------|
| OSW-1 P1 | 9/19/2011 | 11.81 | 8.33 | 107 | 0.433 | 16.35 | 21.1 |
| | 6/25/2012 | 2.52 | 7.4 | 160 | 0.328 | 20.93 | 0 |
| | 9/23/2013 | 14.16 | 7.39 | 157 | 0.394 | 19.25 | 0 |
| | 9/23/2013 | 14.16 | 7.39 | 157 | 0.394 | 19.25 | 0 |
| | 12/11/2017 | NR | NR | NR | NR | NR | NR |
| OSW-1 P2 | 9/19/2011 | 11.29 | 8.13 | 120 | 0.384 | 16.31 | 41.2 |
| | 6/25/2012 | 1.92 | 7.41 | 108 | 0.32 | 18.47 | 0 |
| | 9/23/2013 | 7.28 | 7.69 | 165 | 0.408 | 16.23 | 0 |
| | 12/11/2017 | NR | NR | NR | NR | NR | NR |
| OSW-1 P3 | 9/19/2011 | 11.93 | 8.06 | 127 | 0.365 | 15.53 | 38.5 |
| | 6/25/2012 | 2.03 | 7.59 | 36 | 0.33 | 19.77 | 0 |
| | 9/23/2013 | 6.87 | 7.7 | 161 | 0.398 | 15.24 | 0 |
| | 12/11/2017 | NR | NR | NR | NR | NR | NR |
| OSW-1 P4 | 9/19/2011 | 2.61 | 7.64 | 101 | 0.313 | 19.56 | 11.5 |
| | 6/25/2012 | 2.55 | 7.55 | -139 | 0.405 | 18.82 | 0 |
| | 9/23/2013 | 3.93 | 7.74 | -53 | 0.511 | 15.16 | 0 |
| | 12/11/2017 | NR | NR | NR | NR | NR | NR |
| OSW-1 P5 | 9/19/2011 | 1.37 | 7.15 | 131 | 1.64 | 18.75 | 0 |
| | 6/25/2012 | 1.16 | 7.5 | -151 | 1.86 | 18.13 | 0 |
| | 9/23/2013 | 3.88 | 7.47 | 26 | 2.31 | 15.12 | 0.9 |
| | 12/11/2017 | NR | NR | NR | NR | NR | NR |
| OSW-2 P1 | 9/20/2011 | 2.45 | 7.96 | 67 | 0.436 | 18.67 | 0.3 |
| | 2/14/2012 | 3.73 | 7.41 | 50 | 0.618 | 12.71 | 12.8 |
| | 6/26/2012 | 3.51 | 7.57 | -55 | 0.584 | 20.09 | 0 |
| | 9/23/2013 | 5.21 | 7.17 | -174 | 0.758 | 15.76 | 2.3 |
| | 12/5/2013 | 4.41 | 7.82 | -160 | 0.779 | 14.44 | 0 |
| | 4/28/2014 | 3.19 | 7.18 | -2 | 0.774 | 13.73 | 0 |
| | 7/7/2014 | 7.27 | 7.73 | -80 | 0.66 | 19.35 | 73.3 |
| | 10/14/2014 | 5.88 | 8.82 | -101 | 0.748 | 18.57 | 0.8 |
| OSW-2 P2 | 9/20/2011 | 2.27 | 7.77 | 84 | 0.485 | 16.95 | 0 |
| | 2/14/2012 | 2.98 | 6.96 | 46 | 0.5 | 12.02 | 6.2 |
| | 6/26/2012 | 3.11 | 7.34 | -102 | 0.414 | 20.05 | 0 |
| | 9/23/2013 | 3.6 | 7.46 | -170 | 0.491 | 15.53 | 2.6 |
| | 12/5/2013 | 3.06 | 8.21 | -169 | 0.535 | 14.36 | 0 |
| | 4/28/2014 | 3.56 | 7.19 | -67 | 0.543 | 12.92 | 0 |
| | 7/7/2014 | 7.33 | 7.74 | -36 | 0.202 | 20.68 | 117 |
| | 10/14/2014 | 14.07 | 8.34 | -88 | 0.471 | 17.54 | 0 |
| OSW-2 P3 | 9/20/2011 | 8.84 | 7.59 | 86 | 0.592 | 16.52 | 0 |
| | 2/14/2012 | 9.93 | 6.67 | 34 | 0.403 | 11.87 | 7.9 |
| | 6/26/2012 | 3.96 | 6.96 | -84 | 0.355 | 18.91 | 0 |
| | 9/23/2013 | 3.57 | 7.01 | -148 | 0.403 | 15.43 | 0.4 |
| | 12/5/2013 | 3.03 | 8.4 | -174 | 0.394 | 14.51 | 0 |
| | 4/28/2014 | 3.74 | 7.49 | -79 | 0.391 | 12.96 | 0 |
| | 7/7/2014 | 8.45 | 8.09 | -83 | 0.11 | 17.96 | 87.1 |
| | 10/14/2014 | 13.2 | 7.85 | -57 | 0.362 | 16.27 | 0 |
| OSW-2 P4 | 9/20/2011 | 0 | 7.88 | -122 | 0.383 | 16.15 | 1.4 |
| | 2/14/2012 | 0.93 | 7.68 | 87 | 0.402 | 17.1 | 0.9 |
| | 6/26/2012 | 2.05 | 6.85 | 17 | 0.394 | 11.92 | 12.3 |
| | 9/23/2013 | 3.94 | 6.84 | -65 | 0.359 | 18.93 | 0 |
| | 12/5/2013 | 3.32 | 6.96 | -136 | 0.392 | 15.43 | 2.7 |
| | 4/28/2014 | 2.88 | 8.15 | -148 | 0.396 | 14.56 | 0 |
| | 7/7/2014 | 3.94 | 7.32 | -57 | 0.403 | 13.24 | 0 |
| | 10/14/2014 | 8.58 | 8.11 | -6 | 0.355 | 17.34 | 100 |
| OSW-2 P5 | 9/20/2011 | 11.69 | 7.8 | -48 | 0.37 | 16.13 | 0 |
| | 2/14/2012 | 0 | 7.85 | -108 | 0.284 | 15.88 | 2.1 |
| | 6/26/2012 | 0.85 | 7.81 | 96 | 0.399 | 16.59 | 0 |
| | 9/23/2013 | 1.81 | 7.09 | 1 | 0.403 | 12.37 | 14.4 |
| | 12/5/2013 | 4.04 | 8.04 | -6 | 0.345 | 18.74 | 0 |
| | 4/28/2014 | 2.97 | 7.43 | -138 | 0.418 | 15.31 | 0.1 |
| | 7/7/2014 | 2.31 | 8.13 | -153 | 0.424 | 14.56 | 0 |
| | 10/14/2014 | 3.45 | 7.49 | -52 | 0.437 | 13.06 | 0 |
| OSW-2 P6 | 9/20/2011 | 7.48 | 7.79 | -60 | 0.211 | 20.1 | 38.7 |
| | 2/14/2012 | 12.12 | 8.11 | -72 | 0.396 | 16.37 | 0 |
| | 6/26/2012 | 0 | N/A | -83 | 0.533 | 15.98 | 0.7 |
| | 9/23/2013 | 2.73 | 7.2 | -119 | 1.1 | 15.26 | 0.2 |
| | 12/5/2013 | 3.81 | 7.23 | -22 | 1.09 | 14.48 | 0 |
| | 4/28/2014 | 8.77 | 7.9 | -36 | 0.97 | 13.01 | 0 |
| | 7/7/2014 | 12.29 | 7.93 | -53 | 0.98 | 19030 | 45.8 |
| | 10/14/2014 | 0 | 7.73 | -53 | 0.485 | 16.07 | 0.1 |

TABLE 2
FIELD PARAMETER DATA
OSW SERIES MONITORING WELLS

| Sample Location | Sample Date | Dissolved Oxygen | pH | REDOX potential | Specific Conductivity | Temperature | Turbidity |
|-----------------|-------------|------------------|------|-----------------|-----------------------|-------------|-----------|
| OSW-3 P1 | 9/21/2011 | 2.57 | 7.6 | 67 | 0.523 | 16.52 | 0 |
| | 11/8/2011 | 2.47 | 7.92 | 133 | 0.513 | 17.34 | 7.6 |
| | 2/14/2012 | 9.47 | 7.33 | -15 | 0.598 | 18.32 | 3.3 |
| | 6/26/2012 | 4.64 | 7.69 | -182 | 0.485 | 21.8 | 0 |
| | 9/24/2013 | 4.16 | 7.17 | -191 | 0.594 | 21.3 | 0 |
| | 12/5/2013 | 2.42 | 7.83 | -198 | 0.63 | 14.94 | 0 |
| | 4/28/2014 | 4.09 | 6.81 | 13 | 0.613 | 19.5 | 0 |
| | 7/8/2014 | 9.44 | 7.65 | -22 | 0.494 | 24.36 | 0 |
| | 10/14/2014 | 14.83 | 8.14 | -58 | 0.549 | 15.93 | 0 |
| | 11/16/2017 | 1.62 | 7.16 | 1 | 0.493 | 16.48 | 0 |
| OSW-3 P2 | 9/21/2011 | 2.39 | 8.03 | 40 | 0.368 | 17.2 | 0 |
| | 11/8/2011 | 3.47 | 8.04 | 119 | 0.367 | 17.56 | 11.4 |
| | 2/14/2012 | 13.69 | 7.09 | 160 | 0.377 | 18.45 | 0.9 |
| | 6/26/2012 | 3.49 | 7.6 | -156 | 0.346 | 21.05 | 0 |
| | 9/24/2013 | 4.05 | 6.95 | 17 | 0.433 | 18.03 | 0 |
| | 12/5/2013 | 3.29 | 8.04 | -115 | 0.429 | 15.24 | 0 |
| | 4/28/2014 | 4.3 | 7.23 | 6 | 0.405 | 13.2 | 0 |
| | 7/8/2014 | 11.46 | 7.95 | 47 | 0.367 | 17.51 | 0 |
| | 10/14/2014 | 14.62 | 7.95 | -17 | 0.362 | 16.35 | 0 |
| | 11/16/2017 | 3.62 | 7.63 | 112 | 0.300 | 16.23 | 0 |
| OSW-3 P3 | 9/21/2011 | 0.9 | 7.83 | 75 | 0.373 | 17.12 | 0 |
| | 11/8/2011 | 2.04 | 8.12 | 111 | 0.374 | 17.63 | 8.6 |
| | 2/14/2012 | 12.77 | 7.48 | 96 | 0.379 | 18.45 | 0.1 |
| | 6/26/2012 | 3.3 | 7.64 | -119 | 0.315 | 20 | 0.1 |
| | 9/24/2013 | 3.91 | 6.83 | 109 | 0.424 | 18.66 | 0 |
| | 12/5/2013 | 2.62 | 8.07 | 1 | 0.393 | 15.19 | 0 |
| | 4/28/2014 | 3.27 | 7.1 | 42 | 0.41 | 13.19 | 0 |
| | 7/8/2014 | 10.02 | 7.94 | 68 | 0.363 | 17.97 | 0 |
| | 10/14/2014 | 15.06 | 8.07 | -22 | 0.357 | 15.01 | 0 |
| | 11/16/2017 | 0 | 7.74 | 130 | 0.294 | 15.73 | 0 |
| OSW-3 P4 | 9/21/2011 | 0.96 | 7.75 | 77 | 0.368 | 17.2 | 0 |
| | 11/8/2011 | 2.44 | 8.19 | 107 | 0.356 | 17.64 | 9.1 |
| | 2/14/2012 | 11.06 | 7.59 | 89 | 0.367 | 18.92 | 0.4 |
| | 6/26/2012 | 2.5 | 7.84 | -153 | 0.31 | 18.95 | 0 |
| | 9/24/2013 | 3.71 | 6.81 | 140 | 0.412 | 18.79 | 0 |
| | 12/5/2013 | 3.02 | 8.11 | 53 | 0.38 | 15.1 | 0 |
| | 4/28/2014 | 3.9 | 7.44 | 16 | 0.376 | 12.91 | 0 |
| | 7/8/2014 | 10.45 | 8.01 | 80 | 0.351 | 16.67 | 0 |
| | 10/14/2014 | 14.56 | 7.95 | -6 | 0.349 | 15.07 | 0 |
| | 11/16/2017 | 0 | 7.8 | 140 | 0.281 | 15.52 | 0.2 |
| OSW-3 P5 | 9/21/2011 | 0.86 | 7.63 | 86 | 0.398 | 16.84 | 0 |
| | 11/8/2011 | 2.02 | 8.14 | 108 | 0.4 | 18.06 | 7.2 |
| | 2/14/2012 | 12.63 | 7.63 | -17 | 0.41 | 18.3 | 2 |
| | 6/26/2012 | 1.37 | 7.92 | -156 | 0.364 | 21.37 | 0 |
| | 9/24/2013 | 3.26 | 5.51 | 198 | 0.523 | 19.63 | 0 |
| | 12/5/2013 | 1.83 | 8.09 | 34 | 0.446 | 15.13 | 0 |
| | 4/28/2014 | 3.01 | 7.12 | 17 | 0.438 | 13.53 | 0 |
| | 7/8/2014 | 9.65 | 8.2 | 86 | 0.385 | 16.54 | 0 |
| | 10/14/2014 | 13.62 | 7.91 | 6 | 0.382 | 15.08 | 0 |
| | 11/16/2017 | 0 | 7.77 | -9 | 0.315 | 15.44 | 0.1 |
| OSW-3 P6 | 9/21/2011 | 0.4 | 7.72 | 63 | 0.403 | 16.78 | 0 |
| | 11/8/2011 | 2.9 | 8.08 | 99 | 0.416 | 18.09 | 7.5 |
| | 2/14/2012 | 9.75 | 7.75 | -64 | 0.412 | 18.33 | 2.2 |
| | 6/26/2012 | 1.64 | 7.91 | -210 | 0.364 | 18.89 | 0 |
| | 9/24/2013 | 3.5 | 7.25 | -66 | 0.436 | 18.06 | 0 |
| | 12/5/2013 | 1.87 | 8.1 | -63 | 0.431 | 15.19 | 0 |
| | 4/28/2014 | 3.29 | 7.04 | 24 | 0.434 | 13.8 | 0 |
| | 7/8/2014 | 8.65 | 8.06 | -17 | 0.397 | 17.21 | 0 |
| | 10/14/2014 | 12.54 | 7.74 | 14 | 0.393 | 15.38 | 0 |
| | 11/16/2017 | 0 | 7.83 | -95 | 0.337 | 15.28 | 0.5 |

TABLE 2
FIELD PARAMETER DATA
OSW SERIES MONITORING WELLS

| Sample Location | Sample Date | Dissolved Oxygen | pH | REDOX potential | Specific Conductivity | Temperature | Turbidity |
|-----------------|-------------|------------------|------|-----------------|-----------------------|-------------|-----------|
| OSW-4 P1 | 9/21/2011 | 1.58 | 7.67 | 101 | 0.426 | 16.87 | 0 |
| | 11/7/2011 | 3.45 | 7.48 | 148 | 0.444 | 14.77 | 10.2 |
| | 6/25/2012 | 2.3 | 7.54 | -121 | 0.4 | 20.93 | 0 |
| OSW-4 P2 | 9/21/2011 | 2.37 | 7.41 | 115 | 0.467 | 16.51 | 0 |
| | 11/7/2011 | 3.05 | 7.1 | 158 | 0.444 | 15.16 | 9.7 |
| | 6/25/2012 | 2.18 | 7.51 | -67 | 0.427 | 21.04 | 0 |
| | 9/24/2013 | 8.02 | 6.9 | 115 | 0.521 | 19.24 | 0.2 |
| OSW-4 P3 | 9/21/2011 | 5.44 | 7.45 | 87 | 0.485 | 16.48 | 0 |
| | 11/7/2011 | 1.6 | 6.93 | 166 | 0.427 | 15.25 | 8.8 |
| | 6/25/2012 | 0.9 | 7.82 | -155 | 0.356 | 19.04 | 0 |
| | 9/24/2013 | 4.71 | 7.36 | 12 | 0.416 | 16.85 | 0 |
| OSW-4 P4 | 9/21/2011 | 0.52 | 7.18 | 62 | 0.432 | 16.66 | 0 |
| | 11/7/2011 | 1.37 | 6.99 | 125 | 0.409 | 16.2 | 8.8 |
| | 6/25/2012 | 1.46 | 7.93 | -149 | 0.347 | 21.07 | 0 |
| | 9/24/2013 | 3.49 | 7.18 | 74 | 0.413 | 18.66 | 0.9 |
| OSW-4 P5 | 9/21/2011 | 0.64 | 7.07 | 60 | 0.455 | 15.97 | 0 |
| | 11/7/2011 | 1.55 | 7.12 | 137 | 0.424 | 16.24 | 6.4 |
| | 6/25/2012 | 2.03 | 7.77 | -147 | 0.369 | 20.05 | 0 |
| | 9/24/2013 | 4.33 | 7.64 | 90 | 0.418 | 16.95 | 0 |
| OSW-5 P1 | 9/25/2013 | 5.48 | 7.82 | 22 | 0.487 | 17.84 | 0 |
| | 12/6/2013 | 1.91 | 8.1 | -161 | 0.47 | 12.98 | 0 |
| | 4/29/2014 | 5.29 | 7.58 | 112 | 0.502 | 10.69 | 0 |
| | 7/7/2014 | 7.85 | 8.07 | 58 | 0.375 | 19.78 | 50.3 |
| | 10/15/2014 | 9.55 | 9.12 | -101 | 0.428 | 15.92 | 0 |
| | 11/17/2017 | 0 | 7.59 | -78 | 0.382 | 13.49 | 0 |
| OSW-5 P2 | 9/25/2013 | 3.23 | 7.36 | -94 | 0.562 | 17.28 | 0 |
| | 12/6/2013 | 1.76 | 7.85 | -163 | 0.525 | 13.08 | 0 |
| | 4/29/2014 | 4.39 | 7.53 | 2 | 0.51 | 10.78 | 0 |
| | 7/7/2014 | 7.43 | 7.97 | -56 | 0.48 | 20.79 | 79.8 |
| | 10/15/2014 | 10.76 | 8.93 | -119 | 0.507 | 15.14 | 0 |
| | 11/17/2017 | 0 | 7.55 | -24 | 0.499 | 14.1 | 0 |
| OSW-5 P3 | 9/25/2013 | 2.84 | 6.39 | 16 | 0.513 | 17.93 | 0 |
| | 12/6/2013 | 1.63 | 7.83 | -169 | 0.45 | 13.33 | 0 |
| | 4/29/2014 | 4.37 | 7.23 | -23 | 0.43 | 10.37 | 0 |
| | 7/7/2014 | 6.29 | 8.1 | -142 | 0.335 | 22.01 | 99.1 |
| | 10/15/2014 | 11.28 | 8.65 | -100 | 0.365 | 14.99 | 0 |
| | 11/17/2017 | 0 | 7.9 | -69 | 0.288 | 14.34 | 0 |
| OSW-5 P4 | 9/25/2013 | 2.65 | 7.69 | -119 | 0.42 | 16.85 | 0 |
| | 12/6/2013 | 3.65 | 7.88 | -167 | 0.406 | 13.26 | 0 |
| | 4/29/2014 | 4.45 | 7.37 | -35 | 0.411 | 10.16 | 0 |
| | 7/7/2014 | 6.87 | 8.08 | -89 | 0.342 | 21.37 | 88.5 |
| | 10/15/2014 | 11.62 | 8.62 | -87 | 0.35 | 14.8 | 0 |
| | 11/17/2017 | 0 | 7.85 | 23 | 0.282 | 14.63 | 0 |
| OSW-5 P5 | 9/25/2013 | 2.86 | 7.9 | -135 | 0.592 | 16.59 | 0 |
| | 12/6/2013 | 1.42 | 7.82 | -168 | 0.606 | 13.07 | 0 |
| | 4/29/2014 | 4.16 | 7.01 | -63 | 0.629 | 10.23 | 0 |
| | 7/7/2014 | 6.15 | 8.14 | -131 | 0.487 | 21.66 | 85.8 |
| | 10/15/2014 | 11.88 | 8.38 | -68 | 0.55 | 15.3 | 0 |
| | 11/17/2017 | 0 | 7.6 | -121 | 0.461 | 14.68 | 0 |
| OSW-5 P6 | 9/25/2013 | 2.33 | 7.35 | -145 | 0.804 | 16.9 | 0 |
| | 12/6/2013 | 2.26 | 7.66 | -174 | 0.785 | 13.46 | 0 |
| | 4/29/2014 | 4.33 | 6.44 | -39 | 0.895 | 10.3 | 0 |
| | 7/7/2014 | 6.77 | 7.96 | -168 | 0.669 | 20.84 | 81.9 |
| | 10/15/2014 | 11.22 | 8.14 | -79 | 0.738 | 14.82 | 0 |
| | 11/17/2017 | 0 | 7.6 | -73 | 0.634 | 14.64 | 0 |

TABLE 2
FIELD PARAMETER DATA
OSW SERIES MONITORING WELLS

| Sample Location | Sample Date | Dissolved Oxygen | pH | REDOX potential | Specific Conductivity | Temperature | Turbidity |
|-----------------|-------------|------------------|------|-----------------|-----------------------|-------------|-----------|
| OSW-6 P1 | 9/25/2013 | 4.82 | 7.26 | 199 | 0.916 | 18.69 | 0 |
| | 12/6/2013 | 3.14 | 8.02 | -130 | 0.92 | 13.15 | 0 |
| | 4/29/2014 | 4 | 6.81 | 9 | 0.929 | 10.29 | 0 |
| | 7/8/2014 | 10.6 | 7.57 | 76 | 0.84 | 17.39 | 0 |
| | 10/15/2014 | 12.95 | 8.51 | -70 | 0.804 | 15.15 | 0 |
| | 11/16/2017 | 0 | 6.96 | 91 | 0.752 | 14.87 | 0 |
| OSW-6 P2 | 9/25/2013 | 4.51 | 7.73 | -78 | 0.57 | 16.99 | 0.9 |
| | 12/6/2013 | 2.82 | 8.1 | -134 | 0.536 | 13.03 | 0 |
| | 4/29/2014 | 3.5 | 7.34 | -43 | 0.473 | 10.11 | 0 |
| | 7/8/2014 | 9.23 | 7.82 | 74 | 0.418 | 16.7 | 0 |
| | 10/15/2014 | 12.84 | 8.86 | -93 | 0.4 | 14.99 | 0 |
| | 11/16/2017 | 0 | 7.66 | 9 | 0.312 | 15.08 | 4 |
| OSW-6 P3 | 9/25/2013 | 3.86 | 7.85 | -36 | 0.465 | 16.62 | 0 |
| | 12/6/2013 | 2.45 | 8.08 | -133 | 0.443 | 12.84 | 0 |
| | 4/29/2014 | 6.24 | 7.42 | -53 | 0.427 | 10.19 | 0 |
| | 7/8/2014 | 9 | 7.42 | 77 | 0.375 | 17.15 | 0 |
| | 10/15/2014 | 11.52 | 8.87 | -85 | 0.362 | 16.77 | 0 |
| | 11/16/2017 | 0 | 7.77 | 67 | 0.287 | 15.14 | 0 |
| OSW-6 P4 | 9/25/2013 | 5.3 | 8.16 | -175 | 0.528 | 18.95 | 0 |
| | 12/6/2013 | 3.12 | 8.01 | -179 | 0.521 | 12.52 | 0 |
| | 4/29/2014 | 4.09 | 7.69 | -61 | 0.544 | 10.04 | 0 |
| | 7/8/2014 | 8.47 | 7.99 | -148 | 0.479 | 16.58 | 0 |
| | 10/15/2014 | 10.92 | 8.57 | -91 | 0.476 | 15.34 | 0 |
| | 11/16/2017 | 0 | 7.74 | -67 | 0.391 | 15.05 | 0 |
| OSW-6 P5 | 9/25/2013 | 2.55 | 7.26 | -163 | 0.618 | 18.04 | 0 |
| | 12/6/2013 | 2.05 | 7.99 | -197 | 0.585 | 13.14 | 0 |
| | 4/29/2014 | 3.75 | 7.66 | -83 | 0.591 | 10.16 | 0 |
| | 7/8/2014 | 8.4 | 7.98 | -167 | 0.56 | 16.76 | 0 |
| | 10/15/2014 | 10.88 | 8.39 | -90 | 0.549 | 14.81 | 0 |
| | 11/16/2017 | 0 | 7.72 | -103 | 0.458 | 15.07 | 0 |
| OSW-7 P1 | 5/15/2017 | 2.81 | 7.75 | 284 | 0.343 | 15.94 | 0.3 |
| | 8/7/2017 | 2.11 | 8.2 | -17 | 0.381 | 16.13 | 0 |
| | 11/17/2017 | 2.13 | 7.81 | 92 | 0.363 | 14.88 | 0 |
| OSW-7 P2 | 5/15/2017 | 1.03 | 7.59 | 291 | 0.272 | 15.58 | 5.0 |
| | 8/7/2017 | 0.16 | 7.97 | -43 | 0.285 | 16.18 | 0.0 |
| | 11/17/2017 | 7.88 | 7.83 | -26 | 0.275 | 14.92 | 0.0 |
| OSW-7 P3 | 5/15/2017 | 2.48 | 7.72 | 104 | 0.277 | 15.30 | 5.1 |
| | 8/7/2017 | 0.43 | 7.95 | -63 | 0.285 | 16.05 | 0 |
| | 11/17/2017 | 0 | 7.91 | -115 | 0.271 | 15.02 | 0 |
| OSW-7 P4 | 5/15/2017 | 0.32 | 7.47 | 20 | 0.353 | 15.25 | 3.0 |
| | 8/7/2017 | 0 | 7.9 | -77 | 0.336 | 15.82 | 0.0 |
| | 11/17/2017 | 0 | 7.82 | -139 | 0.318 | 15.06 | 0.0 |
| OSW-7 P5 | 5/15/2017 | 0.41 | 7.42 | -10 | 0.413 | 15.15 | 1.2 |
| | 8/7/2017 | 0 | 7.79 | -112 | 0.431 | 15.76 | 0 |
| | 11/17/2017 | 0 | 7.72 | -153 | 0.417 | 15.04 | 0 |
| OSW-7 P6 | 5/15/2017 | 0.4 | 7.21 | -23 | 0.731 | 15.01 | 3.0 |
| | 8/7/2017 | 0 | 7.56 | -106 | 1.030 | 15.85 | 0.1 |
| | 11/17/2017 | 0 | 7.47 | -163 | 1.100 | 14.99 | 0.0 |
| OSW-7 P7 | 5/15/2017 | 1.08 | 7.1 | 6 | 1.580 | 14.95 | 3.1 |
| | 8/7/2017 | 0 | 7.46 | -73 | 1.98 | 15.56 | 0 |
| | 11/17/2017 | 0 | 7.34 | -175 | 2.060 | 14.95 | 0 |
| OSW-8 P1 | 5/15/2017 | 4.45 | 7.71 | 290 | 0.183 | 12.91 | 7.1 |
| | 8/7/2017 | 2.86 | 8.04 | 46 | 0.204 | 15.01 | 1.1 |
| | 11/17/2017 | 2.44 | 7.85 | 113 | 0.199 | 12.26 | 1.3 |
| OSW-8 P2 | 5/15/2017 | 1.73 | 7.61 | 294 | 0.254 | 12.90 | 0.5 |
| | 8/7/2017 | 0 | 7.87 | 12 | 0.270 | 13.04 | 0.4 |
| | 11/17/2017 | 7.27 | 7.87 | 72 | 0.262 | 12.24 | 0.7 |
| OSW-8 P3 | 5/15/2017 | 2.56 | 7.76 | 255 | 0.281 | 12.50 | 3.1 |
| | 8/7/2017 | 0 | 7.91 | -20 | 0.285 | 13.50 | 0.8 |
| | 11/17/2017 | 0 | 7.95 | 56 | 0.272 | 12.18 | 1.1 |
| OSW-8 P4 | 5/15/2017 | 0.52 | 7.72 | 211 | 0.264 | 12.91 | 4.1 |
| | 8/7/2017 | 0 | 7.98 | -52 | 0.264 | 13.66 | 0 |
| | 11/17/2017 | 6.42 | 7.99 | -129 | 0.244 | 12.12 | 0.9 |
| OSW-8 P5 | 5/15/2017 | 0.65 | 7.19 | 261 | 0.427 | 12.85 | 1.6 |
| | 8/7/2017 | 0 | 7.52 | -29 | 0.463 | 13.21 | 0.5 |
| | 11/17/2017 | 0 | 7.41 | -89 | 0.448 | 12.19 | 0 |
| OSW-8 P6 | 5/15/2017 | 0.44 | 7.74 | 153 | 0.314 | 12.84 | 2.8 |
| | 8/7/2017 | 4.21 | 7.89 | -64 | 0.298 | 13.20 | 1.5 |
| | 11/17/2017 | 6 | 7.92 | -127 | 0.284 | 12.21 | 0 |
| OSW-8 P7 | 5/15/2017 | 0.65 | 7.76 | 21 | 0.318 | 12.80 | 10 |
| | 8/7/2017 | 0 | 7.92 | -85 | 0.337 | 13.11 | 1.4 |
| | 11/17/2017 | 0 | 7.93 | -107 | 0.330 | 11.94 | 1.2 |

NR - parameter not recorded

TABLE 3
DETECTED VOCs IN OSW SERIES MONITORING WELLS
 (All values ug/l)

| Sample Location | Sample Date | Water bearing zone and depth below ground surface. | 1,2-DI BROMO ETHANE | | | | | | | | | | | | | | | | | | BROMO DICHLORO CARBON TETRA CHLORO CHLORO | | | | | | | | | | | |
|-----------------|-------------|--|-------------------------|-------------------------|----------------------|-----------------------|--------------------------|----------------------|-----------------------|----------------------|-----------------------|-----------------------|-----------------------|-------------|---------|---------|---------|----------|------------------|----------------|---|-------------|----------------|--|--|--|--|--|--|--|--|--|
| | | | 1,1,1-TRI CHLORO ETHANE | 1,1,2-TRI CHLORO ETHANE | 1,1-DI CHLORO ETHANE | 1,1-DI CHLORO BENZENE | 1,2,4-TRI CHLORO BENZENE | (ETHYLENE DIBROMIDE) | 1,2-DI CHLORO BENZENE | 1,2-DI CHLORO ETHANE | 1,2-DI CHLORO PROPANE | 1,3-DI CHLORO BENZENE | 1,4-DI CHLORO BENZENE | 1,4-DIOXANE | ACETONE | BENZENE | METHANE | DICHLORO | CARBON DISULFIDE | TETRA CHLORIDE | CHLORO BENZENE | CHLORO FORM | CHLORO METHANE | | | | | | | | | |
| | NJGWQS | | 30 | 3 | 50 | 1 | 9 | 0.03 | 600 | 2 | 1 | 600 | 75 | 0.4 | 6000 | 1 | 1 | 700 | 1 | 50 | 70 | | | | | | | | | | | |
| OSW-1 P1 | 9/19/2011 | Upper Permeable 233 - 243 | | | | | | | | | | | | | | | | 84 | | | | | | | | | | | | | | |
| | 6/25/2012 | | | | | | | | | | | | | | | | | 81 | | | | | | | | | | | | | | |
| | 9/23/2013 | | | | | | | | | | | | | | | | | 140 | 19 | 0.13 | | | | | | | | | | | | |
| | 12/11/2017 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OSW-1 P2 | 9/19/2011 | Principal 290 - 300 | | | | | | | | | | | | | | | | 96 | | | | | | | | | | | | | | |
| | 6/25/2012 | | | | | | | | | | | | | | | | | 44 | | | | | | | | | | | | | | |
| | 9/23/2013 | | | | | | | | | | | | | | | | | 87 | 12 | 0.14 | | | | | | | | | | | | |
| | 12/11/2017 | | | | | | | | | | | | | | | | | | | 0.14 | | | | | | | | | | | | |
| OSW-1 P3 | 9/19/2011 | Principal 350 - 360 | | | | | | | | | | | | | | | | 98 | 28 | | | | | | | | | | | | | |
| | 6/25/2012 | | | | | | | | | | | | | | | | | 30 | | | | | | | | | | | | | | |
| | 9/23/2013 | | | | | | | | | | | | | | | | | 120 | 9.3 | | | | | | | | | | | | | |
| | 12/11/2017 | | | | | | | | | | | | | | | | | | | 11 | 0.13 | 2 | | | | | | | | | | |
| OSW-1 P4 | 9/19/2011 | Principal 400 - 410 | | | | | | | | | | | | | | | | 42 | 45 | | | | | | | | | | | | | |
| | 6/25/2012 | | | | | | | | | | | | | | | | | 29 | | | | | | | | | | | | | | |
| | 9/23/2013 | | | | | | | | | | | | | | | | | 110 | 9.1 | 0.099 | | | | | | | | | | | | |
| | 12/11/2017 | | | | | | | | | | | | | | | | | | | 0.13 | 4.8 | | | | | | | | | | | |
| OSW-1 P5 | 9/19/2011 | Lower Bedrock 520 - 530 | | | | | | | | | | | | | | | | 36 | 32 | | | | | | | | | | | | | |
| | 6/25/2012 | | | | | | | | | | | | | | | | | 11 | | 0.35 | | | | | | | | | | | | |
| | 9/23/2013 | | | | | | | | | | | | | | | | | 81 | | | | | | | | | | | | | | |
| | 12/11/2017 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OSW-2 P1 | 9/20/2011 | Upper Permeable 70 - 80 | | | | | | | | | | | | | | | | 8.4 | | 3.9 | | | | | | | | | | | | |
| | 9/20/2011 | | 0.49 | 5.6 | 5.3 | 0.48 | | 17 | 18 | 1.8 | 0.24 | 1.2 | | | | | | 7.3 | | 3.8 | | | | | | | | | | | | |
| | 9/20/2011 | | 0.53 | 5.5 | 5.3 | 0.5 | 0.017 | 16 | 18 | 1.9 | 0.26 | 1.2 | | | | | | 610 | 560 | 0.21 | | | | | | | | | | | | |
| | 2/14/2012 | | | | 0.19 | | | | | | | | | | | | | 95 | 19 | | | | | | | | | | | | | |
| | 6/26/2012 | | | | | | | | | | | | | | | | | 360 | 80 | 0.14 | | | | | | | | | | | | |
| | 9/23/2013 | | | | | | | | | | | | | | | | | 140 | 29 | 0.12 | | | | | | | | | | | | |
| | 12/5/2013 | | | | | | | | | | | | | | | | | 120 | 12 | | | | | | | | | | | | | |
| | 4/28/2014 | | | | | | | | | | | | | | | | | 45 | | | | | | | | | | | | | | |
| | 7/7/2014 | | | | | | | | | | | | | | | | | 210 | 18 | 0.19 | | | | | | | | | | | | |
| | 10/14/2014 | | | | | | | | | | | | | | | | | 130 | 2.5 J | 0.54 J | | | | | | | | | | | | |
| | 11/16/2017 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OSW-2 P2 | 9/20/2011 | Upper Permeable 190 - 200 | | | | | | | | | | | | | | | | 11 | 5.8 | | | | | | | | | | | | | |
| | 2/14/2012 | | 0.12 | 6 | 2.3 | | | | | | | | | | | | | 450 | 360 | 3.7 | | | | | | | | | | | | |
| | 6/26/2012 | | 0.092 | 4.9 | 2.3 | | | | | | | | | | | | | 100 | 72 | 2.3 | | | | | | | | | | | | |
| | 9/23/2013 | | | | 3.5 | 1.3 | | | | | | | | | | | | 170 | 34 | 0.62 | | | | | | | | | | | | |
| | 12/5/2013 | | | | 3.1 | 1.2 | | | | | | | | | | | | 83 | 33 | 0.53 | | | | | | | | | | | | |
| | 4/28/2014 | | | | 2.9 | 1.2 | | | | | | | | | | | | 73 | 13 | 0.29 | | | | | | | | | | | | |
| | 7/7/2014 | | | | 3.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

TABLE 3
DETECTED VOCs IN OSW SERIES MONITORING WELLS
(All values ug/l)

| Sample Location | Sample Date | Water bearing zone and depth below ground surface. | CIS-1,2-DI CHLORO | DIBROMO CYCLO ETHYLENE HEXANE | DICHLORO METHANE | BENZENE/ XYLEMES, TOTAL | DIMETHYL DIBROMIDE | METHYL ETHYL KETONE | METHYL (2-BUTA CYCLO HEXANE | TERT-BUTYL METHYL | TETRA CHLORO ETHYLENE (PCE) | TOLEUENE | TRANS-1,2- DICHLORO ETHENE | TRI CHLORO FLUORO ETHYLENE (TCE) | TRI CHLORO FLUORO METHANE FREON TF | VINYL CHLORIDE | TVO* TVO (w/o 1,4 Dioxane and Acetone)* | |
|-----------------|-------------|--|-------------------|-------------------------------|------------------|-------------------------|--------------------|---------------------|-----------------------------|-------------------|-----------------------------|----------|----------------------------|----------------------------------|---------------------------------------|-----------------------------|--|--------|
| NJGWQS | | 70 | 1 | 1000 | 1000 | 0.03 | 300 | 3 | 70 | 1 | 600 | 100 | 1 | 2000 | 20000 | 1 | 1.74 84.75 0.75 1.37 1.37 167.53 8.53 | |
| OSW-1 P1 | 9/19/2011 | Upper | | | | | | | | | 0.41 | 0.23 | | | | | 1.74 1.99 1.99 1.99 1.99 1.99 1.99 | |
| | 6/25/2012 | Permeable | | | | 0.36 | | 0.25 | | | 0.25 | 0.2 | | | | | 84.75 0.75 1.37 1.37 167.53 8.53 | |
| | 9/23/2013 | 233 - 243 | | | | | | 3.3 | 0.75 | | 2.3 | 0.95 | | | | | | |
| OSW-1 P2 | 9/19/2011 | | | | | | | | | | 0.57 | 0.29 | | | | | 1.99 96.54 0.54 0.74 0.74 102.6 3.60 | |
| | 6/25/2012 | Principal | | | | | | | | | 0.32 | | | | | | | |
| | 9/23/2013 | 290 - 300 | | | | | | | 0.83 | | 1.3 | | 0.2 | 0.28 | | | 0.74 0.74 102.6 3.60 | |
| OSW-1 P3 | 9/19/2011 | | | | | | | | | | 0.36 | 0.27 | | | | | 2.07 127.17 1.17 30.97 0.97 130.74 1.44 | |
| | 6/25/2012 | Principal | | | | | | | | | 0.45 | 0.22 | | | | | | |
| | 9/23/2013 | 350 - 360 | | | | 0.31 | | | | | 0.15 | 0.27 | | | | | | |
| OSW-1 P4 | 9/19/2011 | | 0.18 | | | | | 1.6 | | | 0.58 | | | | | | 69.28 88.91 0.91 29.32 0.32 119.929 0.83 | |
| | 6/25/2012 | Principal | | | | | | | | | 30 | 0.37 | | | | | | |
| | 9/23/2013 | 400 - 410 | | | | | | | | | 1.3 | | | | | | | |
| | 12/11/2017 | | | | | | | 0.73 | | | 0.19 | | | | | | | |
| OSW-1 P5 | 9/19/2011 | 0.95 | | | | | | | | | 4 | 7.5 | | | | | 31.81 103.43 35.43 38.88 27.88 90.8 9.80 | |
| | 6/25/2012 | Lower Bedrock | 1.3 | | | | | | | | 0.69 | 11 | | | | | | |
| | 9/23/2013 | 520 - 530 | 0.93 | | | | | 0.73 | | | 0.16 | 8.6 | | | | | | |
| | 12/11/2017 | 0.89 | | | | | 0.57 | | | 0.46 | 5.5 | | | | | | | |
| OSW-2 P1 | 9/20/2011 | 46 | | | | | | 2.2 | 0.21 | 1.8 | 1 | 0.17 | 150 | | 2.9 | 432.44 432.507 425.21 | 424.04 | |
| | 9/20/2011 | 46 | | | | | | 2.3 | 0.2 | 1.9 | 1 | 0.19 | 150 | | 2.9 | | | |
| | 2/14/2012 | 0.68 | | | | | 11 | 0.25 | | | 0.62 | 0.86 | | | 0.21 | 1185.41 116.64 2.64 | 15.41 | |
| | 6/26/2012 | 0.71 | | | | | | | | 0.2 | 0.73 | | | | | | | |
| | 9/23/2013 | Upper Permeable | 4.7 | | | | 3.7 | | | 0.68 | 1.4 | | | | | | 91.26 11.26 | |
| | 12/5/2013 | 4.6 | | | | | | | | 0.49 | 1.5 | | | | | | 179.99 10.99 | |
| | 4/28/2014 | 70 - 80 | 1.9 | | | | | | | 0.23 | 0.64 | | | | | | 135.11 3.11 | |
| | 7/7/2014 | 3.4 | | | | | | | | 0.27 | 1.4 | | | | | | 51.52 6.52 | |
| | 10/14/2014 | 6.9 | | | | | | | | | 2 | | | | | | 237.94 27.94 | |
| | 11/16/2017 | 4.9 | | | | | 0.22 J | | | 0.36 J | 1.9 | | | | 2.60 | 143.74 11.24 | | |
| OSW-2 P2 | 9/20/2011 | 30 | | | | | 0.81 | | 1 | 1.2 | 0.21 | 56 | | 6.6 | 206.94 456.93 320.092 118.09 | 195.94 | | |
| | 2/14/2012 | 20 | | | | 6.1 | 0.5 | | 0.74 | 1.2 | 45 | | | 4.6 | 963.93 320.092 118.09 | 153.93 | | |
| | 6/26/2012 | 15 | | | | | | 0.55 | 0.87 | 0.21 | 38 | | | 3.3 | | | | |
| | 9/23/2013 | Upper Permeable | 13 | | | | 0.69 | | 0.4 | 0.58 | 27 | | | | | 111.97 77.97 | | |
| | 12/5/2013 | 12 | | | | | 0.49 | | 0.4 | 0.55 | 29 | | | | | 192.12 76.12 | | |
| | 4/28/2014 | 190 - 200 | 13 | | | | 0.35 | | 0.44 | 0.46 | 27 | | | | 1.1 | 159.88 76.58 | | |
| | 7/7/2014 | 10 | | | | | | 0.42 | 0.36 | 0.15 | 29 | | | | 1.3 | 98.84 72.84 | | |
| | 10/14/2014 | 12 | | | | | | 0.45 | | | 27 | | | | 1.3 | 143.58 67.58 | | |
| | 11/16/2017 | 9.6 | | | | | 0.27 J | | 0.24 J | 1.7 | 10 | | | | 4.7 | 190.45 40.45 | | |
| OSW-2 P3 | 9/20/2011 | 1.3 | | | | | 1.2 | | 1.2 | 0.73 | 1.6 | | | | | 17.02 618.867 348.87 | 7.12 | |
| | 2/14/2012 | 16 | | | | | 2 | | 1.5 | 0.32 | 200 | | | | 1.6 | 547.881 365.98 | 536.88 | |
| | 6/26/2012 | 17 | | | | | 3 | | 0.77 | 0.77 | 100 | | | | 2 | 436.98 120 | 365.98 | |
| | 9/23/2013 | 28 | | | | 2.7 | | 3.6 | 0.89 | 0.85 | 0.13 | 120 | | | | 1.7 | 495.49 120 | 401.49 |
| | 12/5/2013 | 28 | | | | | 2.1 | | 1.1 | 0.59 | 140 | | | | 1.5 | 521.273 120 | 464.57 | |
| | 4/28/2014 | 250 - 260 | 23 | | | | 1.6 | | 1 | 0.81 | 130 | | | | 2.2 | 420.782 120 | 395.78 | |
| | 7/7/2014 | 17 | | | | | 1.7 | | 0.99 | 1.1 | 120 | | | | 2.2 | 464.54 120 | 397.54 | |
| | 10/14/2014 | 22 | | | | | 1.6 | | 0.82 J | 1.1 | 100 | | | | 2.2 | 392.753 100 | 339.75 | |
| OSW-2 P4 | 9/20/2011 | 32 | | | | | 1.2 | | 1.3 | 4.1 | 120 | | | | 2.7 | 470.535 120 | 424.54 | |
| | 2/14/2012 | 23 | | | | | 1 | | 1.4 | 1.1 | 140 | | | | 2.2 | 599.674 120 | 415.67 | |
| | 6/26/2012 | 19 | | | | | 1 | | 1.2 | 0.67 | 140 | | | | 1.8 | 448.422 120 | 408.42 | |
| | 9/23/2013 | 21 | | | | | 0.71 | | 1.1 | 0.58 | 130 | | | | | 543.51 120 | 389.51 | |
| | 12/5/2013 | 32 | | | | | 0.8 | | 1.61 | 1.42 | 197 | | | | 2.6 | 800.32 120 | 596.32 | |
| | 4/28/2014 | 315 - 325 | 21 | | | | 0.68 | | 1.4 | 0.49 | 150 | | | | 1.4 | 461.131 120 | 450.13 | |
| | 7/7/2014 | 20 | | | | | | 1.2 | 0.75 | 150 | | | | | 2.3 | 423.097 120 | 412.10 | |
| | 10/14/2014 | 18 | | | | | 1.4 | | | 140 | | | | | 1.3 | 420.799 120 | 373.80 | |
| | 11/16/2017 | 13 | | | | | 0.31 J | | 0.78 J | 1.5 | 88 | | | | 1.5 | 258.62 88 | 244.62 | |
| OSW-2 P5 | 9/20/2011 | 29 | | | | | 1.6 | | 1.3 | 15 | 0.19 | 210 | | | 3 | | | |

TABLE 3
DETECTED VOCs IN OSW SERIES MONITORING WELLS
 (All values ug/l)

| Sample Location | Sample Date | Water bearing zone and depth below ground surface. | 1,2-DI BROMO | | | | | | | | | | | | | | | | | | BROMO | CARBON DICHLORO | CARBON TETRA CHLORIDE | CHLORO BENZENE | CHLORO FORM | CHLORO METHANE | |
|-----------------|-------------|--|-------------------------|-------------------------|----------------------|----------------------|--------------------------|-----------------------------|-----------------------|----------------------|-----------------------|-----------------------|-----------------------|-------------|---------|---------|-------|-----|---|-------|-------|-----------------|-----------------------|----------------|-------------|----------------|--|
| | | | 1,1,1-TRI CHLORO ETHANE | 1,1,2-TRI CHLORO ETHANE | 1,1-DI CHLORO ETHANE | 1,1-DI CHLORO ETHENE | 1,2,4-TRI CHLORO BENZENE | ETHANE (ETHYLENE DIBROMIDE) | 1,2-DI CHLORO BENZENE | 1,2-DI CHLORO ETHANE | 1,2-DI CHLORO PROPANE | 1,3-DI CHLORO BENZENE | 1,4-DI CHLORO BENZENE | 1,4-DIOXANE | ACETONE | BENZENE | 1 | 700 | 1 | 50 | 70 | | | | | | |
| | NJGWQS | | 30 | 3 | 50 | 1 | 9 | 0.03 | 600 | 2 | 1 | 600 | 75 | 0.4 | 6000 | 1 | 1 | 700 | 1 | 50 | 70 | | | | | | |
| OSW-3 P1 | 11/8/2011 | | | | | | | | | | | | | 120 | 110 | | | | | | | 0.16 | | | | | |
| | 2/14/2012 | | | | | | | | | | | | | 2.7 | | | | | | | | | | | | | |
| | 6/26/2012 | | | | | | | | | | | | | 73 | 91 | 0.099 | | | | | | | | | | | |
| | 9/24/2013 | Upper Permeable | | | | | | | | | | | | 290 | 5.7 | | | | | | | | | | | | |
| | 12/5/2013 | | | | | | | | | | | | | 39 | | 0.11 | | | | | | 3.9 | | | | | |
| | 4/28/2014 | | 70 - 80 | | | | | | | | | | | 87 | | | | | | | | 0.54 | | | | | |
| | 7/8/2014 | | | | | | | | | | | | | 6.7 | | | | | | | | | | | | | |
| | 10/14/2014 | | | | | | | | | | | | | 3.8 | | | | | | | | | 0.14 | | | | |
| | 11/16/2017 | | | | | | | | | | | | | 2.4 | | | | | | | | | | | | | |
| OSW-3 P2 | 11/8/2011 | | | | | | | | | | | | | 10 | 14 | | | | | | | | 0.39 | | | | |
| | 2/14/2012 | | | | | | | | | | | | | 4.3 | | | | | | | | | 0.36 | | | | |
| | 6/26/2012 | | | | | | | | | | | | | 73 | 62 | | | | | | | | 0.13 | | | | |
| | 9/24/2013 | Upper Permeable | | | | | | | | | | | | 29 | | | | | | | | | | | | | |
| | 12/5/2013 | | | | | | | | | | | | | 3.8 | | | | | | | | | | | | | |
| | 4/28/2014 | | 130 - 140 | | | | | | | | | | | 3.1 | | | | | | | | | 0.13 | 0.64 | | | |
| | 7/8/2014 | | | | | | | | | | | | | 4 | | | | | | | | | | | | | |
| | 10/14/2014 | | | | | | | | | | | | | 3.9 | | | | | | | | | | | | | |
| | 11/16/2017 | | | | | | | | | | | | | 4.2 | | | | | | | | | | | | | |
| OSW-3 P3 | 11/8/2011 | | 0.49 | 1.8 | 1.3 | | | | | 0.7 | 0.71 | | | 9.3 | 9.8 | | | | | | | 19 | | 83 | | | |
| | 2/14/2012 | | 0.26 | 1.4 | 0.54 | | | | | 0.55 | 0.75 | | | 4.2 | | | | | | | | 9.1 | 59 | | | | |
| | 6/26/2012 | | 0.45 | 1.6 | 1.4 | | | | | 0.67 | 0.71 | | | 85 | | 61 | 0.16 | | | | | 7.9 | 76 | | | | |
| | 9/24/2013 | Principal 200 - 210 | 0.32 | 1.3 | 0.79 | | | | | 0.49 | 0.54 | | | 17 | | | | | | | | 17 | 61 | | | | |
| | 12/5/2013 | | 1 | 0.8 | | | | | | 0.48 | | | | 4.3 | | | | | | | | 17 | 52 | | | | |
| | 4/28/2014 | | 0.19 | 0.75 | | | | | 0.45 | 0.45 | | | 2.6 | | | | | | | | 0.55 | 16 | 55 | | | | |
| | 7/8/2014 | | 0.23 | 1.1 | 0.88 | | | | 0.32 | 0.48 | | | 3.5 | | | | | | | | 17 | 47 | | | | | |
| | 10/14/2014 | | 0.22 | 0.97 | 0.66 | | | | 0.4 | 0.39 | | | 3.7 | | | | | | | | 15 | 42 | | | | | |
| | 11/16/2017 | | 0.68 J | 0.45 J | | | | | 0.37 J | 0.28 J | | | 2.7 | | | | | | | | 13 | 31 | | | | | |
| OSW-3 P4 | 11/8/2011 | | 0.63 | 0.55 | | | | | 0.36 | 0.2 | | | 6.8 | | | | | | | | 15 | 19 | | | | | |
| | 2/14/2012 | | 0.51 | 0.22 | | | | | | | | | | 78 | | 80 | 0.095 | | | | 0.67 | 4.4 | 14 | | | | |
| | 6/26/2012 | | 0.48 | 0.41 | | | | | 0.28 | | | | | 8 | | | | | | | | 22 | | | | | |
| | 9/24/2013 | Principal 264 - 274 | 0.43 | 0.39 | | | | | 0.26 | 0.18 | | | 1.9 | | | | | | | | 11 | 14 | | | | | |
| | 12/5/2013 | | 0.4 | 0.35 | | | | | | | | | | 1.9 | | | | | | | 11 | 13 | | | | | |
| | 4/28/2014 | | 0.47 | 0.55 | | | | | | | | | | 2.2 | | | | | | | 0.42 | 15 | 16 | | | | |
| | 7/8/2014 | | 0.4 | 0.37 | | | | | 0.21 | | | | | 1.5 | | | | | | | 10 | 12 | | | | | |
| | 10/14/2014 | | 0.33 | | | | | | | | | | | 0.76 | | | | | | | 10 | 11 | | | | | |
| | 11/16/2017 | | 0.27 J | | | | | | | | | | | 2.7 | | | | | | | 7.3 | 7.5 | | | | | |
| OSW-3 P5 | 11/8/2011 | | 0.27 | 0.82 | 1.9 | | | | | 1.2 | 0.69 | | | 5.4 | | | | | | | 67 | 84 | | | | | |
| | 2/14/2012 | | 0.15 | 0.59 | 0.68 | | | | | 0.68 | 0.6 | | | 2.6 | | | | | | | 22 | 57 | | | | | |
| | 6/26/2012 | | 0.22 | 0.72 | 1.7 | | | | | 0.77 | 0.65 | | | 80 | | 100 | 0.12 | | | | 7.2 | 100 | | | | | |
| | 9/24/2013 | Principal 350 - 360 | 0.48 | 1.1 | | | | | | 0.52 | 0.48 | | | 2.8 | | | | | | | 34 | 53 | | | | | |
| | 12/5/2013 | | 0.25 | 0.3 | | | | | | 0.22 | | | | 2 | | | | | | | 3.8 | 8.6 | 27 | | | | |
| | 4/28/2014 | | 0.49 | 1.6 | | | | | | 0.81 | 0.33 | | | | | | | | | 0.091 | 0.43 | 45 | 48 | | | | |
| | 7/ | | | | | | | | | | | | | | | | | | | | | | | | | | |

TABLE 3
DETECTED VOCs IN OSW SERIES MONITORING WELLS
(All values ug/l)

| Sample Location | Sample Date | Water bearing zone and depth below ground surface. | CIS-1,2-DI CHLORO ETHYLENE | CYCLO HEXANE | DIBROMO CHLORO DIFLUORO METHANE | DIMETHYL BENZENE/XYLEMES, TOTAL | ETHYLENE DIBROMIDE | METHYL (2-BUTA KETONE CYCLO HEXANE | METHYL METHYLENE CHLORIDE | TERT-BUTYL METHYL ETHER | TETRA CHLORO ETHYLENE (PCE) | TOLEUENE | TRANS-1,2- DICHLORO ETHENE | TRI CHLORO FLUORO METHANE | TRI CHLORO FLUORO FREON TF | VINYL CHLORIDE | TVO* TVO (w/o 1,4 Dioxane and Acetone)* |
|-----------------|-------------|--|----------------------------|--------------|---------------------------------|---------------------------------|--------------------|------------------------------------|---------------------------|-------------------------|-----------------------------|----------|----------------------------|---------------------------|----------------------------|----------------|---|
| NJGWQS | | | | | | | | | | | | | | | | | |
| OSW-3 P1 | 11/8/2011 | | 70 | 1 | 1000 | 1000 | 0.03 | 300 | 3 | 70 | 1 | 600 | 100 | 1 | 2000 | 20000 | 1 |
| | 2/14/2012 | | | | | | | 1.4 | | 0.52 | | 1.3 | | 0.23 | | 233.61 | 3.61 |
| | 6/26/2012 | | | | | | | | | 0.25 | | 0.58 | | 0.38 | | 3.91 | 1.21 |
| | 9/24/2013 | Upper Permeable | | | 0.27 | 0.49 | | | | 0.3 | | 0.83 | | 0.32 | | 165.819 | 1.82 |
| | 12/5/2013 | | | | | | | | 3.4 | | | | | | | 10.29 | 4.59 |
| | 4/28/2014 | | | | | | | | | | | | | | | 46.83 | 7.83 |
| | 7/8/2014 | | | | | | | | | | | | | | | 88.31 | 1.31 |
| | 10/14/2014 | | | | | | | | | | | | | | | 4.44 | 0.64 |
| | 11/16/2017 | | | | | | | | | | | | | | | 2.96 | 0.56 |
| OSW-3 P2 | 11/8/2011 | | | | | | | | | | | | | | | 26.61 | 2.61 |
| | 2/14/2012 | | | | | | | | | | | | | | | 6.42 | 2.12 |
| | 6/26/2012 | | | | | | | | | | | | | | | 136.83 | 1.83 |
| | 9/24/2013 | Upper Permeable | | | | 0.4 | | | | | | | | | | 29.55 | 0.55 |
| | 12/5/2013 | | | | | | | | | | | | | | | 4.23 | 0.43 |
| | 4/28/2014 | | | | | | | | | | | | | | | 4.12 | 1.02 |
| | 7/8/2014 | | | | | | | | | | | | | | | 0.19 | 0.19 |
| | 10/14/2014 | | | | | | | | | | | | | | | 4.15 | 0.25 |
| | 11/16/2017 | | | | | | | | | | | | | | | 5.06 | 0.86 |
| OSW-3 P3 | 11/8/2011 | | | | | | | | | | | | | | | 234.06 | 214.96 |
| | 2/14/2012 | | | | | | | | | | | | | | | 158.35 | 154.15 |
| | 6/26/2012 | | | | | | | | | | | | | | | 324.58 | 178.58 |
| | 9/24/2013 | Principal | | | | | | | | | | | | | | 174.65 | 157.65 |
| | 12/5/2013 | | | | | | | | | | | | | | | 146.56 | 142.26 |
| | 4/28/2014 | | | | | | | | | | | | | | | 138.82 | 136.22 |
| | 7/8/2014 | | | | | | | | | | | | | | | 0.16 | 135.39 |
| | 10/14/2014 | | | | | | | | | | | | | | | 121.11 | 117.41 |
| | 11/16/2017 | | | | | | | | | | | | | | | 61.76 | 59.06 |
| OSW-3 P4 | 11/8/2011 | | | | | | | | | | | | | | | 68.35 | 61.55 |
| | 2/14/2012 | | | | | | | | | | | | | | | 36.8 | 36.80 |
| | 6/26/2012 | | | | | | | | | | | | | | | 198.745 | 40.75 |
| | 9/24/2013 | Principal | | | | | | | | | | | | | | 53.74 | 45.74 |
| | 12/5/2013 | | | | | | | | | | | | | | | 44.44 | 42.54 |
| | 4/28/2014 | | | | | | | | | | | | | | | 51.14 | 51.14 |
| | 7/8/2014 | | | | | | | | | | | | | | | 40.91 | 38.71 |
| | 10/14/2014 | | | | | | | | | | | | | | | 39.28 | 37.78 |
| | 11/16/2017 | | | | | | | | | | | | | | | 26.27 | 25.51 |
| OSW-3 P5 | 11/8/2011 | | | | | | | | | | | | | | | 262.33 | 256.93 |
| | 2/14/2012 | | | | | | | | | | | | | | | 148.63 | 146.03 |
| | 6/26/2012 | | | | | | | | | | | | | | | 358.04 | 178.04 |
| | 9/24/2013 | Principal | | | | | | | | | | | | | | 152.106 | 149.31 |
| | 12/5/2013 | | | | | | | | | | | | | | | 67.33 | 65.33 |
| | 4/28/2014 | | | | | | | | | | | | | | | 0.3 | 181.831 |
| | 7/8/2014 | | | | | | | | | | | | | | | 0.28 | 149.807 |
| | 10/14/2014 | | | | | | | | | | | | | | | 0.31 | 184.901 |
| | 11/16/2017 | | | | | | | | | | | | | | | 93.88 | 91.88 |
| OSW-3 P6 | 11/8/2011 | | | | | | | | | | | | | | | 6.77 | 4.07 |
| | 2/14/2012 | | | | | | | | | | | | | | | 2.74 | 1.76 |
| | 6/26/2012 | | | | | | | | | | | | | | | 171.85 | 4.85 |
| | 9/24/2013 | Lower Bedrock | | | | | | | 3.1 | | | | | | | 2.73 | 0.63 |
| | 12/5/2013 | | | | | | | | | | | | | | | 0.43 | 0.43 |
| | 4/28/2014 | | | | | | | | | | | | | | | 0.63 | 0.63 |
| | 7/8/2014 | | | | | | | | | | | | | | | 0.47 | 0.47 |
| | 10/14/2014 | | | | | | | | | | | | | | | 0.81 | 0.81 |
| | 11/16/2017 | | | | | | | | | | | | | | | 1.6 | 0.00 |
| OSW-4 P1 | 11/7/2011 | Upper | | | | | | | | | | | | | | 15.39 | 3.49 |
| | 6/25/2012 | Permeable | | | | | | | | | | | | | | 116.28 | 2.28 |
| | 6/25/2012 | 93 - 103 | | | | | | | | | | | | | | 90.44 | 2.44 |
| OSW-4 P2 | 11/7/2011 | | | | | | | | | | | | | | | 12.18 | 2.18 |
| | 6/25/2012 | Principal | | | | | | | | | | | | | | 53.74 | 0.74 |
| | 9/24/2013 | 146 - 156 | | | 0.22 | | | | | | | | | | | 9.77 | 0.97 |
| OSW-4 P3 | 11/7/2011 | | | | | | | | | | | | | | | 14.11 | 14.11 |
| | 6/25/2012 | Principal | | | | | | | | | | | | | | 56.258 | 9.26 |
| | 9/24/2013 | 210 - 220 | | | 1.3 | | | | | | | | | | | 17.19 | 10.59 |
| OSW-4 P4 | 11/7/2011 | | | | | | | | | | | | | | | 8.16 | 8.16 |
| | 6/25/2012 | Principal | | | | | | | | | | | | | | 56.89 | 4.89 |
| | 9/24/2013 | 280 - 290 | | | 0.4 | | | | | | | | | | | 5.58 | 5.58 |
| OSW-4 P5 | 11/7/2011 | Lower Bedrock | | | </ | | | | | | | | | | | | |

TABLE 3
DETECTED VOCs IN OSW SERIES MONITORING WELLS
 (All values ug/l)

TABLE 3
DETECTED VOCs IN OSW SERIES MONITORING WELLS
(All values $\mu\text{g/l}$)

TABLE 3
DETECTED VOCs IN OSW SERIES MONITORING WELLS
 (All values ug/l)

| Sample Location | Sample Date | Water bearing zone and depth below ground surface. | | 1,1,1-TRI CHLORO | 1,1,2-TRI CHLORO | 1,1-DI ETHANE | 1,1-DI CHLORO | 1,2,4-TRI BENZENE | 1,2-DI BROMO ETHANE (ETHYLENE DIBROMIDE) | 1,2-DI CHLORO BENZENE | 1,2-DI CHLORO ETHANE | 1,2-DI PROPANE | 1,3-DI CHLORO BENZENE | 1,4-DI CHLORO BENZENE | 1,4-DIOXANE | BROMO ACETONE | DICHLORO BENZENE | CARBON DISULFIDE | CARBON TETRA CHLORIDE | CARBON CHLORIDE BENZENE | CHLORO FORM | CHLORO METHANE |
|-----------------|-------------|--|---|------------------|------------------|---------------|---------------|-------------------|--|-----------------------|----------------------|----------------|-----------------------|-----------------------|-------------|---------------|------------------|------------------|-----------------------|-------------------------|-------------|----------------|
| | | 30 | 3 | 50 | 1 | 9 | 0.03 | 600 | 2 | 1 | 600 | 75 | 0.4 | 6000 | 1 | 1 | 700 | 1 | 50 | 70 | | |
| NJGWQS | | | | | | | | | | | | | | | | | | | | | | |
| OSW-7 P1 | 5/15/2017 | Upper | | | | | | | | | | | | | 0.99 | | 0.16 J | | | | 1.3 | |
| | 8/7/2017 | Permeable | | | | | | | | | | | | | 18 | | 20 | | | | 1 | |
| | 11/17/2017 | 50 - 60 | | | | | | | | | | | | | 0.84 | | | | | | 1 | |
| OSW-7 P2 | 5/15/2017 | Upper | | | | | | | | | | | | | 2.7 | | 0.18 J | | | | 0.95 J | |
| | 8/7/2017 | Permeable | | | | | | | | | | | | | 39 | | 8.8 | | | | 0.6 J | |
| | 11/17/2017 | 185 - 195 | | | | | | | | | | | | | 140 | | 84 | | | | | |
| OSW-7 P3 | 5/15/2017 | Principal | | | | | | | | | | | | | 2.8 | | 0.13 J | 0.38 J | | | 1.9 | |
| | 8/7/2017 | 290 - 300 | | | | | | | | | | | | | 4.7 | | 3.8 J | 0.12 J | 0.27 J | | 0.55 J | |
| | 11/17/2017 | | | | | | | | | | | | | | 130 | | 99 | 0.093 J | | | | |
| OSW-7 P4 | 5/15/2017 | Principal | | | | | | | | | | | | | 1.4 | | 0.19 J | | | | 1.4 | |
| | 8/7/2017 | 430 - 440 | | | | | | | | | | | | | 4.5 | | 4.8 J | 0.15 J | | | 0.68 J | |
| | 11/17/2017 | | | | | | | | | | | | | | 0.75 | | 1.8 J | 0.12 J | | | 0.38 J | |
| OSW-7 P5 | 5/15/2017 | Lower Bedrock | | | | | | | | | | | | | 0.63 | | 0.33 J | | | | 2.6 | |
| | 8/7/2017 | 460 - 470 | | | | | | | | | | | | | 3.6 | | 4 J | 0.12 J | | | 0.46 J | |
| | 11/17/2017 | | | | | | | | | | | | | | 210 | | 190 | 0.11 J | | | | |
| OSW-7 P6 | 5/15/2017 | Lower Bedrock | | | | | | | | | | | | | 0.74 | | 0.12 J | | | | 1.5 | |
| | 8/7/2017 | 510 - 520 | | | | | | | | | | | | | 4.5 | | 3.4 J | 0.12 J | 0.25 J | | 0.32 J | |
| | 11/17/2017 | | | | | | | | | | | | | | 260 | | 220 | 0.32 J | | | | |
| OSW-7 P7 | 5/15/2017 | Lower Bedrock | | | | | | | | | | | | | 1.8 | | 2.6 J | | | | 0.6 J | |
| | 8/7/2017 | 530 - 540 | | | | | | | | | | | | | 3.2 | | | | | | | |
| | 11/17/2017 | | | | | | | | | | | | | | 0.41 | | | | | | | |
| OSW-8 P1 | 5/15/2017 | Upper | | | | | | | | | | | | | 6.2 | | 8.1 | 0.40 J | | | 1.7 | |
| | 8/7/2017 | Permeable | | | | | | | | | | | | | 4.2 | | 6.1 | | | | 0.31 J | |
| | 11/17/2017 | 65 - 75 | | | | | | | | | | | | | 1.9 | | | | | | | |
| OSW-8 P2 | 5/15/2017 | Upper | | | | | | | | | | | | | 3.3 | | | | | | 0.69 J | 1.8 |
| | 8/7/2017 | Permeable | | | | | | | | | | | | | 16 | | | | | | 0.72 J | 2 |
| | 11/17/2017 | 160 - 170 | | | | | | | | | | | | | 1.3 | | | | | | 0.83 J | 2.1 |
| OSW-8 P3 | 5/15/2017 | Principal | | | | | | | | | | | | | 0.44 J | | 1.2 | 0.13 J | 0.22 J | 4 | 11 | |
| | 8/7/2017 | 255 - 265 | | | | | | | | | | | | | 0.32 J | | 12 | 5.2 | | 5.3 | 10 | |
| | 11/17/2017 | | | | | | | | | | | | | | 1.7 | | | | 6.5 | 9.5 | | |
| OSW-8 P4 | 5/15/2017 | Principal | | | | | | | | | | | | | 0.46 J | | 0.61 J | 0.79 | 0.48 J | 0.39 J | 1.8 | 6.9 |
| | 8/7/2017 | 350 - 360 | | | | | | | | | | | | | 0.27 J | | 1.6 | 3.8 J | 0.30 J | 1.2 | 4.4 | |
| | 11/17/2017 | | | | | | | | | | | | | | 0.25 J | | 0.65 | 7.6 | 0.20 J | 1.6 | 1.9 | |
| OSW-8 P5 | 5/15/2017 | Principal | | | | | | | | | | | | | 0.27 J | | | | | | 0.47 J | 1.8 |
| | 8/7/2017 | 445 - 455 | | | | | | | | | | | | | | | 6.2 | | | | 0.95 J | |
| | 11/17/2017 | | | | | | | | | | | | | | 4 | | 5.2 | | | | 0.80 J | |
| OSW-8 P6 | 5/15/2017 | Lower Bedrock | | | | | | | | | | | | | 0.87 | | | | .032 J | | 3 | |
| | 8/7/2017 | 470 - 485 | | | | | | | | | | | | | 1.1 | | 2.7 J | | | | 2 | |
| | 11/17/2017 | | | | | | | | | | | | | | 150 D | | 26 | | | | 1.4 | |
| OSW-8 P7 | 5/15/2017 | Lower Bedrock | | | | | | | | | | | | | 1.3 | | | | 0.34 J | | 1.9 | |
| | 8/7/2017 | 528 - 543 | | | | | | | | | | | | | 8.6 | | 4.4 J | | | | 1.6 | |
| | 11/17/2017 | | | | | | | | | | | | | | 6.4 | | 6.4 | | | | 1.1 | |

TABLE 3
DETECTED VOCs IN OSW SERIES MONITORING WELLS
(All values ug/l)

| Sample Location | Sample Date | Water bearing zone and depth below ground surface. | CIS-1,2-DI CHLORO | DIBROMO CYCLO ETHYLENE HEXANE | DICHLORO METHANE | BENZENE/ XYLEMES, TOTAL | DIMETHYL DIBROMIDE | METHYL ETHYL KETONE | METHYL (2-BUTA CYCLO | TETRA BUTYL CHLORO | TRI CHLORO | TRI CHLORO | VOC (w/o 1,4 Dioxane and Acetone)* | | | | | |
|-----------------|-------------|--|-------------------|-------------------------------|------------------|-------------------------|--------------------|---------------------|----------------------|--------------------|--------------|----------------|------------------------------------|----------------------------|---------------|----------------|----------|-------|
| | | | ETHYLENE | METHANE | METHANE | XYLEMES, TOTAL | DIBROMIDE | NONE | HEXANE | METHYLENE CHLORIDE | METHYL ETHER | ETHYLENE (PCE) | TOLUENE | TRANS-1,2- DICHLORO ETHENE | CHLORO FLUORO | VINYL FREON TF | CHLORIDE | TVO* |
| | | NJGWQS | 70 | 1 | 1000 | 1000 | 0.03 | 300 | 3 | 70 | 1 | 600 | 100 | 1 | 2000 | 20000 | 1 | |
| OSW-7 P1 | 5/15/2017 | Upper | | | | | | | | | | 0.41 J | | | | 2.86 | 1.87 | |
| | 8/7/2017 | Permeable | | | | | | | | | | 0.32 J | | | | 39.32 | 1.32 | |
| | 11/17/2017 | 50 - 60 | | | | | | | | | | 0.29 J | | | | 2.13 | 1.29 | |
| OSW-7 P2 | 5/15/2017 | Upper | | | | | | | | | | 5.4 | | | | 9.23 | 6.53 | |
| | 8/7/2017 | Permeable | | | | | | | | | | 4 | 0.28 J | | | 52.68 | 4.88 | |
| | 11/17/2017 | 185 - 195 | | | | | | 2.4 J | 0.26 J | | | 0.69 J | | | | 227.35 | 3.35 | |
| OSW-7 P3 | 5/15/2017 | Principal | | | | | | 10 | | | | 29 | | | | 44.21 | 41.41 | |
| | 8/7/2017 | Principal | | | | | | 6.4 | 0.25 J | | | 24 | | | | 40.09 | 31.59 | |
| | 11/17/2017 | 290 - 300 | | | | | | 5.2 | 0.25 J | | | 2.5 | | | | 237.043 | 8.04 | |
| OSW-7 P4 | 5/15/2017 | Principal | | | | | | 4.6 J | | | | 26 | | | | 33.59 | 32.19 | |
| | 8/7/2017 | Principal | | | | | | 5.7 | | | | 14 | | | | 29.83 | 20.53 | |
| | 11/17/2017 | 430 - 440 | | | | | | | | | | | | | | 3.05 | 0.50 | |
| OSW-7 P5 | 5/15/2017 | Lower Bedrock | | | | | | 8.3 | | | | 20 | | | | 31.86 | 31.23 | |
| | 8/7/2017 | 460 - 470 | | | | | | 5 | 0.21 J | | | 10 | | | | 23.39 | 15.79 | |
| | 11/17/2017 | | | | | | | 7.4 | 0.26 J | | | | | | | 407.77 | 7.77 | |
| OSW-7 P6 | 5/15/2017 | Lower Bedrock | | | | | | 19 | | | | 18 | | | | 39.36 | 38.62 | |
| | 8/7/2017 | 510 - 520 | | | | | | 8.1 | | | | 5.1 | | | | 21.79 | 13.89 | |
| | 11/17/2017 | | | | | | | 11 | 0.28 J | | | | | | | 491.6 | 11.60 | |
| OSW-7 P7 | 5/15/2017 | Lower Bedrock | | | | | | 5.7 | | | | 10 | | | | 18.1 | 16.30 | |
| | 8/7/2017 | 530 - 540 | | | | | | | | | | 0.40 J | | | | 6.2 | 0.40 | |
| | 11/17/2017 | | | | | | | | | | | | | | | 0.41 | 0.00 | |
| OSW-8 P1 | 5/15/2017 | Upper | | | | | | | | | | 0.54 J | | | | 16.94 | 2.64 | |
| | 8/7/2017 | Permeable | | | | | | | 0.24 J | | | 0.32 J | | | | 11.17 | 0.87 | |
| | 11/17/2017 | 65 - 75 | | | | | | | | | | 0.27 J | | | | 2.17 | 0.27 | |
| OSW-8 P2 | 5/15/2017 | Upper | | | | | | | | | | 2.8 | 1 | | | 9.59 | 6.29 | |
| | 8/7/2017 | Permeable | | | | | | | | | | 0.62 J | 1 | | | 20.34 | 4.34 | |
| | 11/17/2017 | 160 - 170 | | | | | | | | | | 1 | | | | 5.23 | 3.93 | |
| OSW-8 P3 | 5/15/2017 | Principal | 1.2 | | | | | 7.4 | | | | 9.8 | 9 | | | 0.14 J | 44.53 | 43.33 |
| | 8/7/2017 | Principal | 0.80 J | | | | | 4.8 J | 0.32 J | | | 5.2 | 12 | | | 55.94 | 38.74 | |
| | 11/17/2017 | 255 - 265 | 0.64 J | | | | | 2.4 J | | | | 1.4 | 11 | | | 33.14 | 31.44 | |
| OSW-8 P4 | 5/15/2017 | Principal | 2.8 | | | | | 9.4 | | | | 15 | 4.8 | | | 0.35 J | 43.78 | 42.99 |
| | 8/7/2017 | Principal | 1.1 | | | | | 8.9 | 0.33 J | | | 20 | 2.9 | | | 44.8 | 39.40 | |
| | 11/17/2017 | 350 - 360 | 0.62 J | | | | | 5.7 | 0.24 J | | | 1.8 | 2.2 | | | 22.76 | 14.51 | |
| OSW-8 P5 | 5/15/2017 | Principal | 2 | | | | | 3.3 J | | | | 11 | 3.5 | | | 25.24 | 19.04 | |
| | 8/7/2017 | 445 - 455 | 2 | | | | | | 0.67 J | | | 13 | 3.2 | | | 32.32 | 23.12 | |
| | 11/17/2017 | | 2 | | | | | | 0.23 J | | | 2.3 | 3.1 | | | 11.98 | 9.08 | |
| OSW-8 P6 | 5/15/2017 | Lower Bedrock | 0.55 J | | | | | 4.7 J | | | | 26 | 0.77 J | | | 35.922 | 35.05 | |
| | 8/7/2017 | 470 - 485 | 0.32 J | | | | | 5 | 0.27 J | | | 8.6 | 0.50 J | | | 20.72 | 16.92 | |
| | 11/17/2017 | | | | | | | 3.2 J | | | | 3.2 | 0.32 J | | | 184.34 | 8.34 | |
| OSW-8 P7 | 5/15/2017 | Lower Bedrock | | | | | | 7.9 | 0.22 J | 0.57 J | | 29 | 0.29 J | | | 41.52 | 40.22 | |
| | 8/7/2017 | 528 - 543 | | | | | | | 0.33 J | | | 15 | 0.22 J | | | 30.35 | 17.35 | |
| | 11/17/2017 | | | | | | | | | | | 0.52 J | | | | 14.42 | 1.62 | |

TABLE 4
GROUNDWATER ELEVATIONS
OSW-1 - OSW-8

| Well | Reference | 9/13/2017 | | 12/11/2017 | |
|----------|-------------------------|--------------|---------------------|--------------|---------------------|
| | Elevation (ft., msl) | DTW (ft.) | Elev. (ft., msl) | DTW (ft.) | Elev. (ft., msl) |
| OSW-1 P1 | 82.93 | 22.78 | 60.15 | 23.42 | 59.51 |
| OSW-1 P2 | 82.93 | 23.59 | 59.34 | 24.22 | 58.71 |
| OSW-1 P3 | 82.93 | 23.79 | 59.14 | 24.4 | 58.53 |
| OSW-1 P4 | 82.95 | 23.75 | 59.2 | 23.46 | 59.49 |
| OSW-1 P5 | 82.95 | 24.01 | 58.94 | 24.65 | 58.3 |
| OSW-2 P1 | 77.46 | 17.18 | 60.28 | 17.86 | 59.6 |
| OSW-2 P2 | 77.47 | 17.4 | 60.07 | 18.13 | 59.34 |
| OSW-2 P3 | 77.45 | 18.13 | 59.32 | 18.75 | 58.7 |
| OSW-2 P4 | 77.47 | 18.09 | 59.38 | 18.24 | 59.23 |
| OSW-2 P5 | 77.46 | 18.15 | 59.31 | 18.75 | 58.71 |
| OSW-2 P6 | 77.48 | 18.55 | 58.93 | 18.43 | 59.05 |
| OSW-3 P1 | 74.8 | 14.43 | 60.37 | 15.13 | 59.67 |
| OSW-3 P2 | 74.8 | 14.57 | 60.23 | 15.25 | 59.55 |
| OSW-3 P3 | 74.79 | 15.56 | 59.23 | 16.15 | 58.64 |
| OSW-3 P4 | 74.83 | 15.4 | 59.43 | 16.02 | 58.81 |
| OSW-3 P5 | 74.77 | 15.26 | 59.51 | 15.88 | 58.89 |
| OSW-3 P6 | 74.74 | 14.83 | 59.91 | 15.29 | 59.45 |
| OSW-4 P1 | 72.68 | 12.32 | 60.36 | 13 | 59.68 |
| OSW-4 P2 | 72.66 | 12.84 | 59.82 | 13.35 | 59.31 |
| OSW-4 P3 | 72.66 | 12.64 | 60.02 | 13.37 | 59.29 |
| OSW-4 P4 | 72.68 | 12.77 | 59.91 | 13.02 | 59.66 |
| OSW-4 P5 | 72.64 | 12 | 60.64 | 12.03 | 60.61 |
| OSW-5 P1 | 80 | 20.14 | 59.86 | 20.66 | 59.34 |
| OSW-5 P2 | 79.95 | 19.99 | 59.96 | 20.65 | 59.3 |
| OSW-5 P3 | 80 | 20.38 | 59.62 | 20.97 | 59.03 |
| OSW-5 P4 | 79.95 | 20.39 | 59.56 | 21.02 | 58.93 |
| OSW-5 P5 | 80 | 20.37 | 59.63 | 21.08 | 58.92 |
| OSW-5 P6 | 80 | 20.23 | 59.77 | 20.83 | 59.17 |
| OSW-6 P1 | 75.62 | 15.48 | 60.14 | 16.1 | 59.52 |
| OSW-6 P2 | 75.57 | 15.78 | 59.79 | 16.39 | 59.18 |
| OSW-6 P3 | 75.57 | 15.79 | 59.78 | 16.39 | 59.18 |
| OSW-6 P4 | 75.57 | 15.79 | 59.78 | 16.38 | 59.19 |
| OSW-6 P5 | 75.57 | 15.29 | 60.28 | 15.89 | 59.68 |
| OSW-7 P1 | 79.85 | 19.37 | 60.48 | 20.18 | 59.67 |
| OSW-7 P2 | 79.83 | 19.51 | 60.32 | 20.27 | 59.56 |
| OSW-7 P3 | 79.81 | 19.4 | 60.41 | 20.2 | 59.61 |
| OSW-7 P4 | 79.78 | 19.43 | 60.35 | 20.17 | 59.61 |
| OSW-7 P5 | 79.78 | 19.5 | 60.28 | 20.19 | 59.59 |
| OSW-7 P6 | 79.82 | 19.87 | 59.95 | 20.59 | 59.23 |
| OSW-7 P7 | 79.84 | 20.25 | 59.59 | 20.93 | 58.91 |
| OSW-8 P1 | 82.48 | 21.9 | 60.58 | 23.16 | 59.32 |
| OSW-8 P2 | 82.53 | 22.56 | 59.97 | 23.35 | 59.18 |
| OSW-8 P3 | 82.52 | 22.54 | 59.98 | 23.34 | 59.18 |
| OSW-8 P4 | 82.46 | 22.49 | 59.97 | 23.22 | 59.24 |
| OSW-8 P5 | 82.51 | 22.48 | 60.03 | 23.3 | 59.21 |
| OSW-8 P6 | 82.52 | 22.29 | 60.23 | 22.9 | 59.62 |
| OSW-8 P7 | 82.53 | 19.75 | 62.78 | 22 | 60.53 |



Map Source: Bing Maps

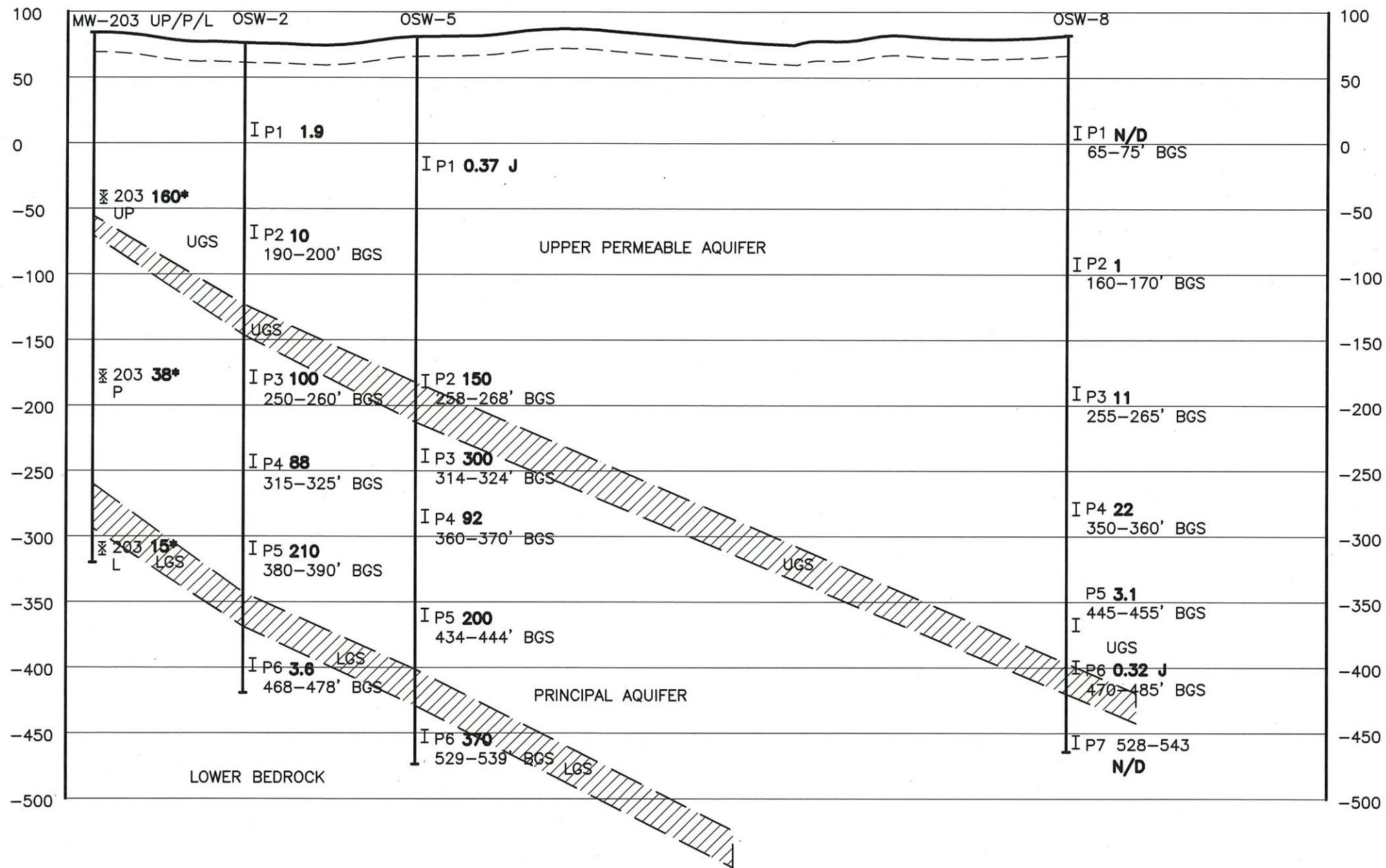


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Off Site Monitoring Well Locations Chemsol Superfund Site

FIGURE NO.

1



LEGEND:

| | |
|--------|--------------------------------------|
| 203 UP | SCREENED MONITORING WELL INTERVAL |
| P2 | FLUTE SAMPLING PORT INTERVAL |
| UGS | UPPER GREY SHALE |
| LGS | LOWER GREY SHALE |
| (1.9) | TRICHLOROETHENE CONCENTRATION (ug/l) |
| N/D | NOT DETECTED |

0 500 1000
HORIZONTAL SCALE IN FEET

0 100 200
VERTICAL SCALE IN FEET

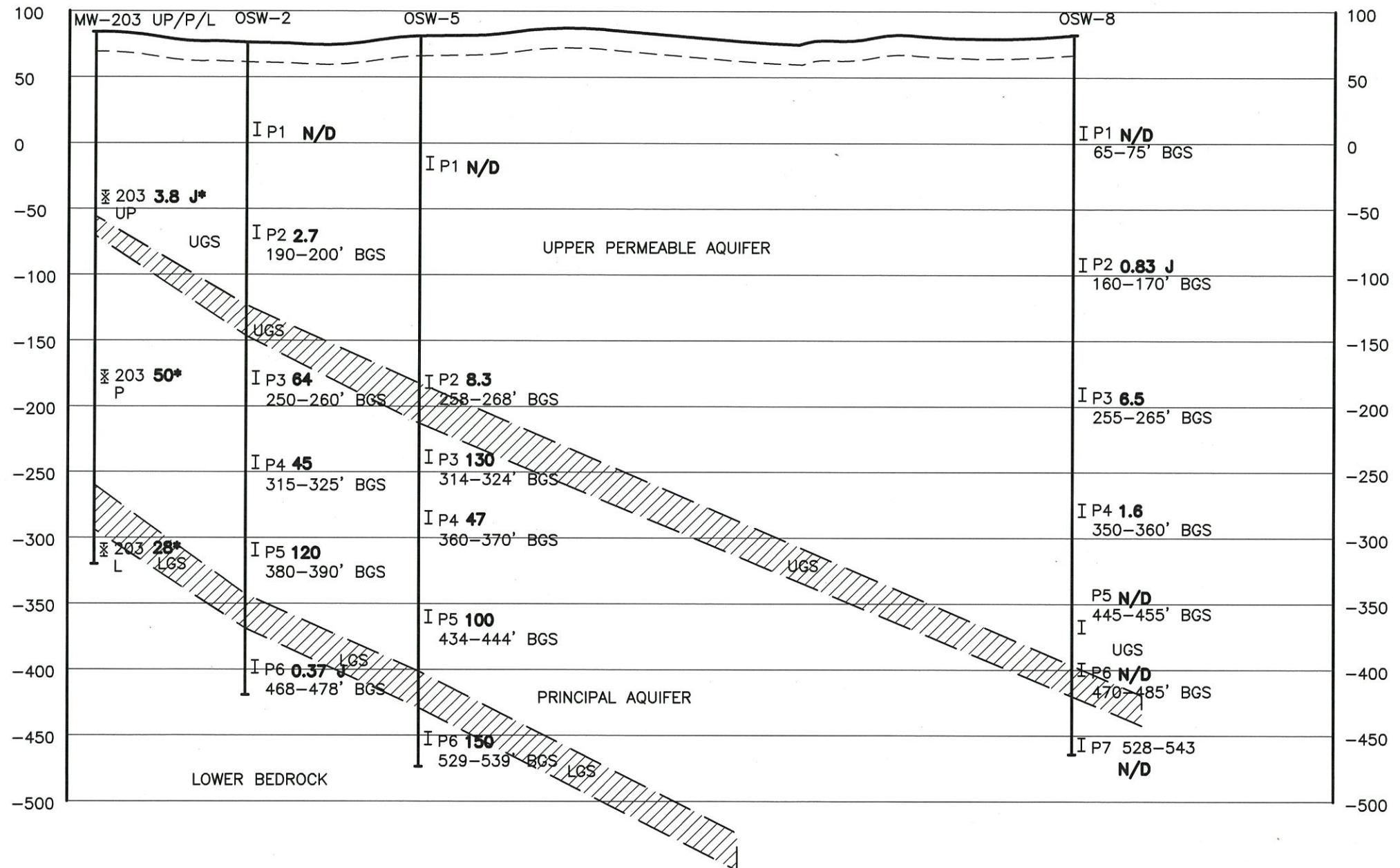
CHEMSOL, INC.
SUPERFUND SITE

CROSS-SECTION THROUGH OFF-SITE WELL LOCATIONS WITH TRICHLOROETHENE CONCENTRATIONS

FIGURE NO. 2
PROJECT NO. 160688



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LEGEND:

X 203 SCREENED MONITORING WELL INTERVAL
UP

I P2 FLUTE SAMPLING PORT INTERVAL

UGS UPPER GREY SHALE

LGS LOWER GREY SHALE

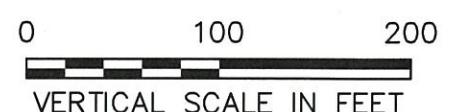
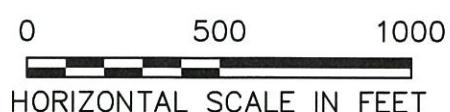
1.9) CARBON TETRACHLORIDE CONCENTRATION
(ug/l)

/D NOT DETECTED

NOTES:

* VALUES FOR MW-203 WELL CLUSTER ARE FROM THE JULY 2017 SEMI-ANNUAL SAMPLING EVENT.

VALUES FOR THE OSW SERIES WELLS ARE FROM NOVEMBER 16, 2017.

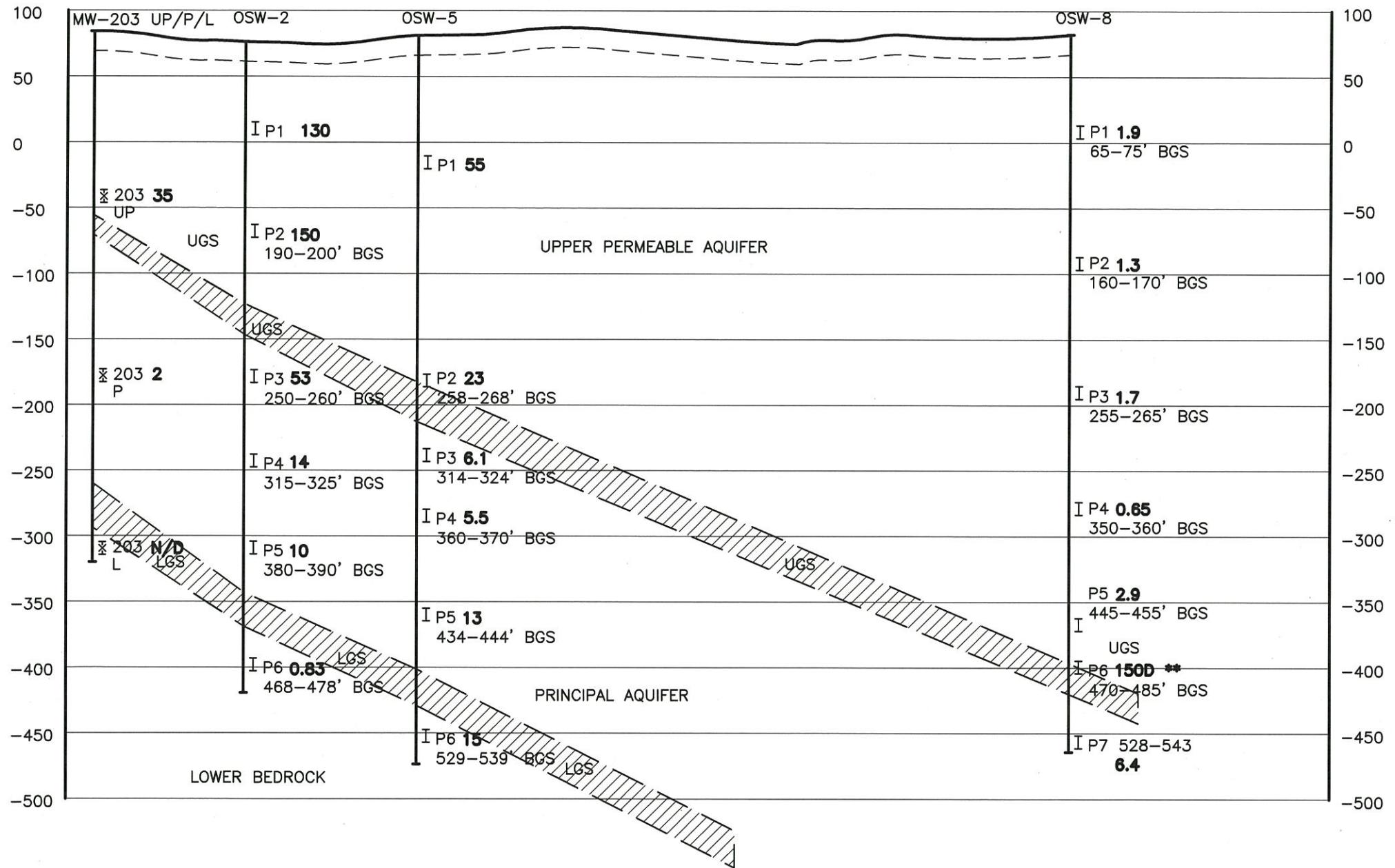


CHEMSOL, INC.
SUPERFUND SITE

CROSS-SECTION THROUGH OFF-SITE WELL LOCATIONS WITH CARBON TETRACHLORIDE CONCENTRATION

FIGURE NO.
3

PROJECT NO.
160688

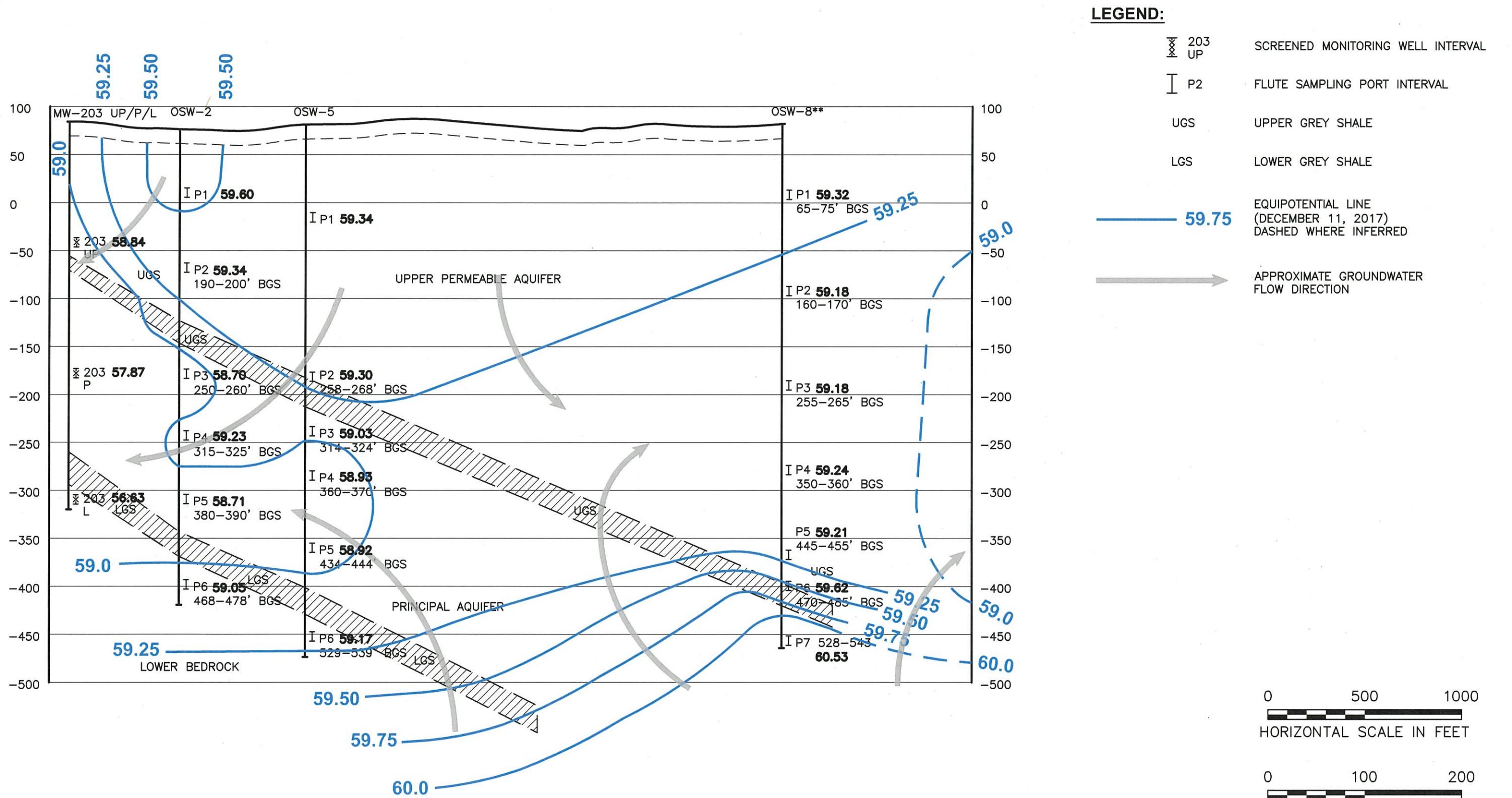


CHEMSOL, INC.
SUPERFUND SITE

CROSS-SECTION THROUGH OFF-SITE WELL
LOCATIONS WITH 1,4 DIOXANE CONCENTRATIONS

FIGURE NO.
4

PROJECT NO.
160688



CHEMSOL, INC.
SUPERFUND SITE
OFF-SITE (OU-3) CROSS-SECTION AND
EQUIPOTENTIAL CONTOURS (DEC 11, 2017)

FIGURE NO.
5
PROJECT NO.
160688